# YACHTING

VOLUME XXIII, NUMBER 1 JANUARY, 1918 25 Cents a Copy $2.50 a Year


# The Swing of the Speed Pendulum

*An Achievement and a Prophecy*

By STILLMAN TAYLOR

A LITTLE motor-gnome poked his head above the polished rim of a priming cup and springing lithely upon the lever, sat straddle-legged on the shiny brass arm.

"Some speed!" he confided to his mate the boat-gnome.

"Snappy work, old Top," he of the boat replied.

"We showed 'em what team work could do," the first diminutive chap answered, puffing out his ruddy cheeks, whereat both laughed merrily for the sheer joy of putting pep into the motor-yachting racing sport.

You may not believe in gnomes, shipmates, but you will very likely agree with me, that when Commodore Judson's 28-foot hydroplane Whip-po-Will, Jr., is officially entitled to the speed honor of almost seventy miles an hour, many interesting factors are directly involved in putting it over.

In a very enjoyable talk with Mr. Judson —the president of the American Power Boat Association, many interesting sidelights were brought to my attention—the racing game was presented from a new angle and I believe a large number of motor yachtsmen would like to hear about it.

COMMODORE ALBERT N. JUDSON, THE ENTHUSIASTIC OWNER AND SKIPPER OF WHIP-PO-WILL, JR. IS OF THE OPINION THAT 100 MILES AN HOUR WILL BE ATTAINED BY THE SPEED BOAT IN A FEW YEARS

To gain a clear and comprehensive idea of the real significance of this noteworthy performance, it is necessary to indulge in a little retrospective history covering a few years, because the evolution of the speed boat has been largely confined to a span of seven years.

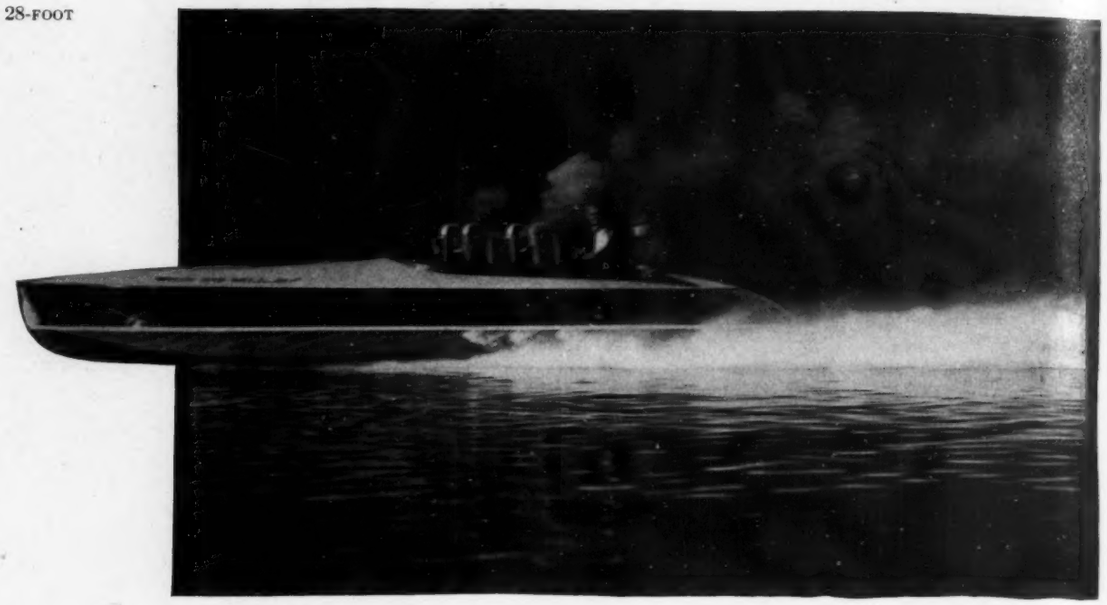
The early history of speed contests indicates a more or less strenuous struggle on the part of the Association to put the sport on a clean-cut and strictly amateur basis. With the definite ideal of "sport for sport's sake" as the slogan, the Association has worked continuously to eliminate—not only the discordant turbulent element, but to discourage entries made with the desire for gain. The high plane of athletic sports in this country to-day is almost entirely due to the untiring efforts of the Amateur Athletic Union, by its constant encouragement of sport for sport's sake. What this association has accomplished in its field, the Power Boat Association has paralleled on the water. That there is ample compensation afforded by the sport in developing and racing high-speed craft, the present status of the A. P. B. A. may be accepted as abundant proof. This is well reflected in the pages of Mr. Charles Tower's interesting historical booklet detailing the life and work of the Association.

From a speed of thirty miles an hour in 1907, the speed pendulum began to swing towards a higher mark. The indicator was going up, but six years elapsed before forty miles an hour was attained and several years passed before an official mile-a-minute boat was developed.

When Miss Detroit II won the speed honors for last year it appeared as if the ultimate was fast approaching. But the unexpected was destined to happen. An enthusiastic yachtsman had a little surprise in the shape of a hydroplane, while known to be fast, had never been reckoned capable of showing the remarkable speed of seventy miles an hour.

But a long and careful study of the speed problem had developed a hull and power plant far above the usual standard. After many trials and failures Whip-po-Will Jr. was at last tuned up. A cold and windy November afternoon is by no means a favorable time to try for a record, but Mr. Judson and his assistants had completed their work and decided to take a sporting chance. The boat was driven over the mile course on Lake George and in officially timed one-mile dashes, an average speed of

IN TWO OF HER BEST RUNS, THE 28-FOOT HYDROPLANE—WHIP-PO-WILL, JR. AVERAGED A MILE IN 51.35 SECONDS, WHICH IS EQUIVALENT TO 70.15 MILES AN HOUR



64.74 miles an hour was reached. Two days later a second trial was conducted and a new record of 69.39 miles an hour was established.

Seventy miles an hour sounds impressive but the accomplishment is really of greater import than the winning of a cup. The general opinion that boat racing is a hobby exploited by wealthy yachtsmen as a fad and nothing more, is an error. The rapid development of the automobile was promoted by the Vanderbilt and other speed contests, which disclosed faults and weaknesses in material and design. The thorough try-out of the motor car under the maximum stress of the highest possible speed is the supreme test, and automobile engineers co-operating through their national association, were quick to remedy mistakes as they occurred. To this hearty co-operation of the fraternity is primarily due the rapid standardization and perfecting of the motor car.

The marine engine has not attracted the public attention to the extent favoring the car, neither have the marine engineers as a national body co-operated to the same extent, but have shown a disposition to work out the problem individually. This is why the evolution and perfectment of marine motors has proceeded more slowly than its sister industry, and standardization is not yet complete.

The experience of Mr. Judson in striving to develop the maximum speed on the water has been replete with disappointments. The difficulty of obtaining a metal for the valves which will stand up under the extreme tests to which the mechanism is at all times subjected, has been most difficult to solve. Various kinds of special steels and other available metals, such as cast-iron heads on steel plungers, have been tried and found wanting. After repeated experiments for over a year, a metal has been found which meets every requirement.

The failure of the spark plug to stand up under the greatest speeds has been likewise the cause of many failures. To go out with a bag of plugs and return with but two or three good ones at the end of the run, is discouraging. But as the valve question has been solved by persistent study, so has the spark plug difficulty been finally overcome. The form now used is made of solid platinum, and was devised and used by De Palma in all his motor car races. As these plugs cost $20 each and four plugs are used for firing each of the twelve cylinders, this one item serves to indicate the large amount of time and expense involved in developing a record breaking power plant.

While the war has interfered with boat racing to some extent, Mr. Judson is optimistic regarding the prospects for the coming season. The yacht clubs affiliated with the Association are showing much interest in the three races already planned for 1918, and The Toronto Yacht Club has lately joined the Association. Many yachtsmen have been called to the colors, but the war has stimulated interest in the younger generation of yachtsmen, and the courses of instruction conducted at many yacht clubs by Naval Officers are well attended.

The contests for the Gold Cup have been largely responsible for the rapid development of the motor boat in the past few years, and the Association has done much missionary work by urging members to study navigation that they may be of service to the Government if called upon for patrol duty. The fact that all local contests conducted by the individual club members of the parent body, now take place under the same rulings, is good assurance that the sport is on a good and purely amateur basis.

With the arrival of favorable weather Mr. Judson is confident the Whip-po-Will will give even a better account of herself than she has already done and that with boats of her type a speed of 100 miles an hour will be attained within a few years.

## The Santa Maria

COINCIDENT with the purchase of the famous old sailing yacht America, comes the news that Doctor Leo Frank of Charlestown, P. E. I., has purchased the replica of Christopher Columbus' flag ship Santa Maria. This little vessel was presented to the United States in 1892 on the four hundredth anniversary of the discovery of America, and she was exhibited at the World's Fair in Chicago the following year.

What an interesting museum might be made of these old vessels. Beginning with the world famous Constitution, (Old Iron Sides); the replica of Half Moon that came to America for the Hudson Fulton celebration; the steam boat Claremont built from the original plans of Robert Fulton, and the first steam boat to navigate in America; Santa Maria, and the two little vessels that came with her, Pinta and Nina; the Viking ship built in connection with an exhibit at the Pan American Fair in 1900 and presented to America as an expression of good will from the people of Norway.

These vessels would well be worth traveling miles to see. What a comparison they form to the modern motor boats and yachts of to-day. The world certainly does move!

# A Second Mate's Yarn

*A Deep Water Voyage Around the Cape of Good Hope to South East Africa in the Bark Lillian*
*Life on an American Windjammer from the Viewpoint of the Quarterdeck.*

Chapter VII

By WM P BRADLEY

IT was while we were waiting for the last of our cargo and loading it laboriously that the first real discontent began to show itself, sure proof that we were all, forward and aft, getting tired of our long voyage, and were anxious to see the end of it and of the ship. Those of us who had homes and families waiting for us, were aching to get back to them, and those who had not were just plain tired of each other, of the ship, her officers and (especially) of the grub, which was getting worse and worse. Seven months of life cooped up on a deck only 140 feet by 30 was beginning to tell on even the most hardened. We were all talked out; each man knew every thought and viewpoint of every one of his shipmates and as we were not a reading crowd, new topics of conversation were totally lacking. No one who has ever taken a long voyage on a windjammer, can conceive how terribly tired one can get of his daily companions.

Every delay in loading caused additional friction. This was manifest in a surliness of the men, and a disposition to go as far as they dared in not obeying orders promptly, and willingly, and, on the part of we who were in command aft, in bullyragging the men and finding fault with trivial things we would have overlooked at another time. Then, also, the dangerous character of the coast we were anchored near and the constant vigilance required to keep from swinging on to some of the reefs that surrounded us, tended to make us overwrought and overbearing. Six months, at the most, is as long as any crew ought to be together if harmony forward and aft is to be preserved. That is why homeward bound voyages are always productive of more hard feeling and abuse than outward bound ones.

Hence we were all glad when we finally started to heave up anchor at Port Yabucoa to sail for Crab Island, where we were to take on board 2000 more bags of sugar to complete our cargo. When we had hove to into eight fathoms, the cable parted again and we lost the anchor we had carried away when we arrived, and had had so much trouble (and expense) in recovering. As a steamer was waiting to tow us out through the dangerous, reef-bound harbor entrance there was nothing for it but to leave the anchor behind us, and we passed a hawser to the waiting steamship while the Old Man stumped the quarter deck and swore as he saw so much good money going to the devil, to be added to the losses of an already unprofitable voyage.

The steamer soon had us clear of the dangerous reefs, and once outside she cast off the hawser and we made sail and beat up through Crab Passage with a head wind. Crab Island is off the last end of Porto Rico and it took us all that day and the next to reach Port Mula, on Crab Island, where we took a pilot and let go on our only remaining bower anchor the next afternoon.

THE SQUARE RIGGED SHIP SMACKS OF THE SEA, AND EVERY LINE AND EVERY INCH OF THEIR CANVAS BESPEAKS THE ROMANCE OF THE DAYS WHEN THEY WERE SUPREME

Here we were detained another two deadly weeks to complete our cargo, and the only break in the monotony was when the Old Man gave the starboard watch liberty, with a couple of dollars of their pay apiece, and they all came back roaring drunk and looking for fight. Truly two "bones" went a long way on Crab Island. We locked the obstreperous ones in the foc's'le with their less fortunate shipmates and let them settle their own differences in their own way. As no heads were broken and no blood spilled, we judged the quality of the liquor on the Island was lacking in some essentials. All hands were able to turn to next morning, though the poor Frenchman was a sorry looking individual, but that ended liberty for the crew that voyage.

The crew cheered up, however, when we got our last bag of sugar stowed under hatches on June 18th and word was passed we would sail at daylight for Delaware Breakwater, where we would get orders as to our ultimate destination. There was no growling when the anchor watch roused out all hands at 3:30 the next morning when the pilot came aboard, and we hadn't seen as much life in the crew since we sailed from Port Natal as when they manned the windlass, the cook coming out of his galley to bear a hand, and the Frenchman in his high pitched voice, struck up "Good By, Fare you well" while every one joined in on the rousing chantey. The cable came in to short stay in jig time with only seven men on the windlass brakes and when the mate reported aft, we left the windlass and swarmed aloft, loosing everything to to'gallants and letting the sails hang in the clew lines while we waited for the breeze. Then the cook stuck his head out of the galley door with a broad grin on his face as he sang out "Coffee, all hot," and the men had a "mug up" just as daylight was coming in the east.

About five o'clock the breeze freshened and we had a fine chance, so the Old Man sang out "Heave around and break out," and we dug our nails in the deck and bent our backs as we broke her from the mud of Port Mula. Everything worked well, as if our bad luck had finally deserted us, and we cleared the harbor entrance, dropped our pilot, passed out by Point San Juan, and at eight o'clock, had the old Lillian headed for Cape May, 1400 miles away in a straight line, with the rattling Trades abeam. Yards were braced with a will, all the kites loosed and sheeted home and as the bone in her teeth began to increase, spirits went up.

We made a cracking day's run, but upon taking several afternoon sights we found our chronometer some four minutes out. We knew it was in error, but did not know just how much until we got this sight on a known longitude, so it was not very dependable for accurate work thereafter. The breeze held and the next day we made another good run, as if luck were with us and were going to give us a fast passage home.

THE MOMENTS WERE RARE WHEN ANY OF US HAD TIME TO PUT ON OUR SHORE CLOTHES AND POSE FOR THE CAMERA

Our spirits were dampened some that evening, however, when we opened a cask of water and found it gone bad, and realized we had only one-third of a barrel of good water left to last us to the Breakwater, unless we should catch some rain water on the way. This brought us all, forward and aft, back to the realization of how poor the pickings were on the old box.

We carried the Trades right up to 25° of North Latitude and then missed the famous belt of calms, known as the Horse Latitudes, and ran right into a strong southerly which lifted us along in great style to latitude 28°, where it lightened and our prospects for a fast passage began to fade out. However, it came up again out of the Sou'west, which was just as good, as our course was about N. N. W. and we knocked off a couple of good days run, which put us well up in the Gulf Stream in about the latitude of Charleston.

Here we got our last bit of stormy weather and that night it came on to blow, a regular, sudden Gulf Stream gale of moderate strength. It was the first bad weather we had encountered since leaving the Cape of Good Hope and it seemed strange to be taking in sail once more and rousing out all hands to reef the topsails. We kept the men hard at it until nearly midnight, when we got her snugged down properly with extra gaskets and lashings around the furled sails. Water was coming aboard from both sides as the wind was N. E. and there was a nasty Gulf Stream cross sea in which the old bark wallowed and dove, flooding the decks constantly.

We kept her going, though, and made good time throughout that night, the next day and the following night. When the wind finally let go we were up to Hatteras and some two degrees east of the cape, and the next day found us on white water north of that stormy and dangerous point of land.

From there to the Breakwater we had fair weather and all hands were looking out sharp for a land fall and speculating on when we would get in, and to what port we would be ordered. At dark of June 30, we were only 20 miles from the Breakwater and flopping about in a calm, with the sails slatting and the yards banging. Sailing vessels and steamers were constantly in sight reminding us, if we needed reminders, that we were getting back to civilization. It is one of the pleasantest feelings I know of to get back to home waters and to see the run of coastwise traffic and the friendly steamers and tows that tell of the near approach to shore, after months of lonely, deserted seas. Every man was speculating as to what was the identity of each steamer we passed, just as if she was some old friend he recognized after a long separation. One of these friends nearly brought us to grief on the last night of our long voyage, while we lay there off the Breakwater, trying to get in. She was a big steamer that came up from our starboard quarter, headed right for us. We flashed a white light aft as she came on without altering her course, but she did not seem to see us and we were just on the point of calling all hands to man the boats when we heard her lookout report us to the bridge and then the sharp order "Hard aport" to the helmsman. Slowly, so slowly it seemed to us, we saw her green light dim as she swung, then disappear entirely as her red light was reflected on our deck and sails as she crashed by not fifty feet distant, as it appeared to our tense nerves. It would have been a tragic ending to an eight months of hard labor if she had not swung when she did.

Towards daylight a tug, hanging around outside to pick up a tow, sighted us and bore down on us; but as the wind was then fair, but light, she saw it would be useless to bargain with us for a tow and sheered off after speaking us and asking where we were bound. Our Old Man would never bother with a tow boat in a chance like that, her skipper knew.

The men of the morning watch saw land

NOW AND AGAIN IN OUR VOYAGE WE PASSED VESSELS OF VARIOUS RIGS

THE STEWARD, ALL DRESSED UP AND NO PLACE TO GO

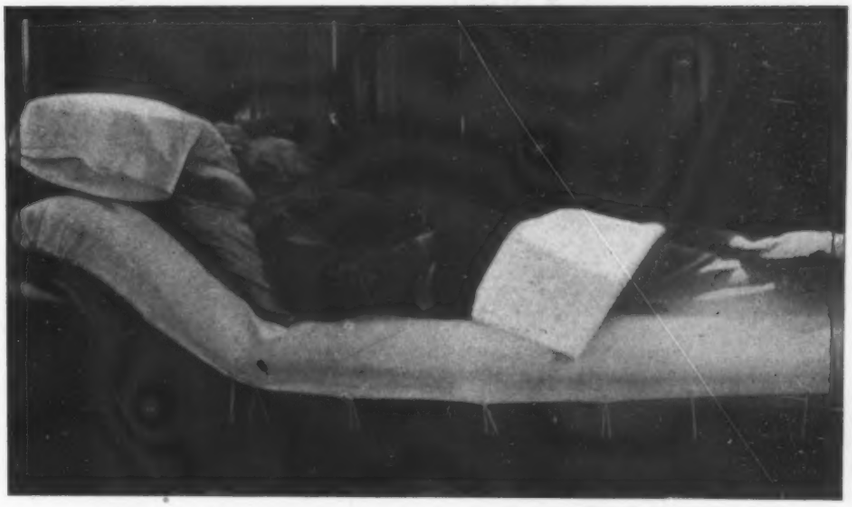
as dawn broke, and passing the joyful word all hands tumbled out for a look at it. There on our port bow lay the long, low white break of Cape Henlopen, with a fringe of green atop of it, and right ahead was the gray mass of rock of the Breakwater itself. It was a fine landfall, and there was no more sleep, forward or aft, after that.

We were all busy raising our cable and shackling it on to our anchor, taking in light sails and making ready for letting go until 7 a. m., when we quietly rounded the Breakwater and dropped our hook with a splash, just twelve days from Crab Island—a good passage for the summer time. Then all hands tumbled down to breakfast, forgetting in the joy at the nearness of the land and the end of the voyage the meagreness of the grub and the trials and hardships of the voyage.

Breakfast over, I called away a boat, and tumbling into her myself to steer, we took the Captain ashore for his orders. They were waiting for us all right, and when we pulled back to the ship the rail was lined with expectant faces, forward and aft. Before we had climbed the rail and hoisted in the boat, the news had spread and the word "Philadelphia" spread forward and aft like wild fire. Philadelphia it was, and at the end of a tow line at that.

There is no need to describe our feelings during the 90 to 100 mile tow up Delaware Bay and River, which started that same afternoon, lasted through the night and ended next day, July 2nd, when we made fast to the dock of the American Sugar Refinery Co.

We did not allow the crew much time for sentiment, however, and saw to it that they earned their $18.00 per month right up to the time we tied up at the dock.



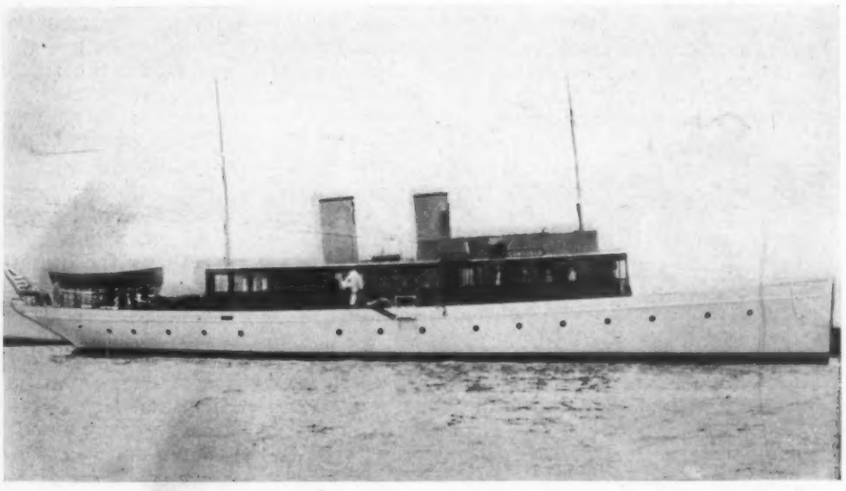
CAPT. DELANO DID MOST OF HIS SLEEPING ON THE SOFA IN THE MAIN CABIN

By evening they had all departed in tow of the land sharks, their bags and chests following on express wagons kindly provided by these same runners (for a consideration) and that night the foc's'le of the old Lillian was a dark and destitute hole, that would hear the voices of the men, their songs, their curses and their laughter, no more until a new crew was shipped for her next long voyage. John the Swede, Murray, the Frenchman, poor half-witted Bertie and the rest of them, were gone out of our lives, to be themselves separated on their next voyage in all probability. Barring the next day when we saw them all at the Shipping Commissioner's office to be paid off, we never met them again. I shook hands with all of them there and wished them luck. I do not believe they bore me any hard feeling, for I had treated them as men when they did their work as men.

As for myself, I had been through the fire and tested on this long eight months' voyage, and realized that now I was a full-fledged officer, viewing things from the angle of the quarter-deck instead of the foc's'le, and had acquired a self-reliance that only comes with the shouldering of responsibility.

THE END

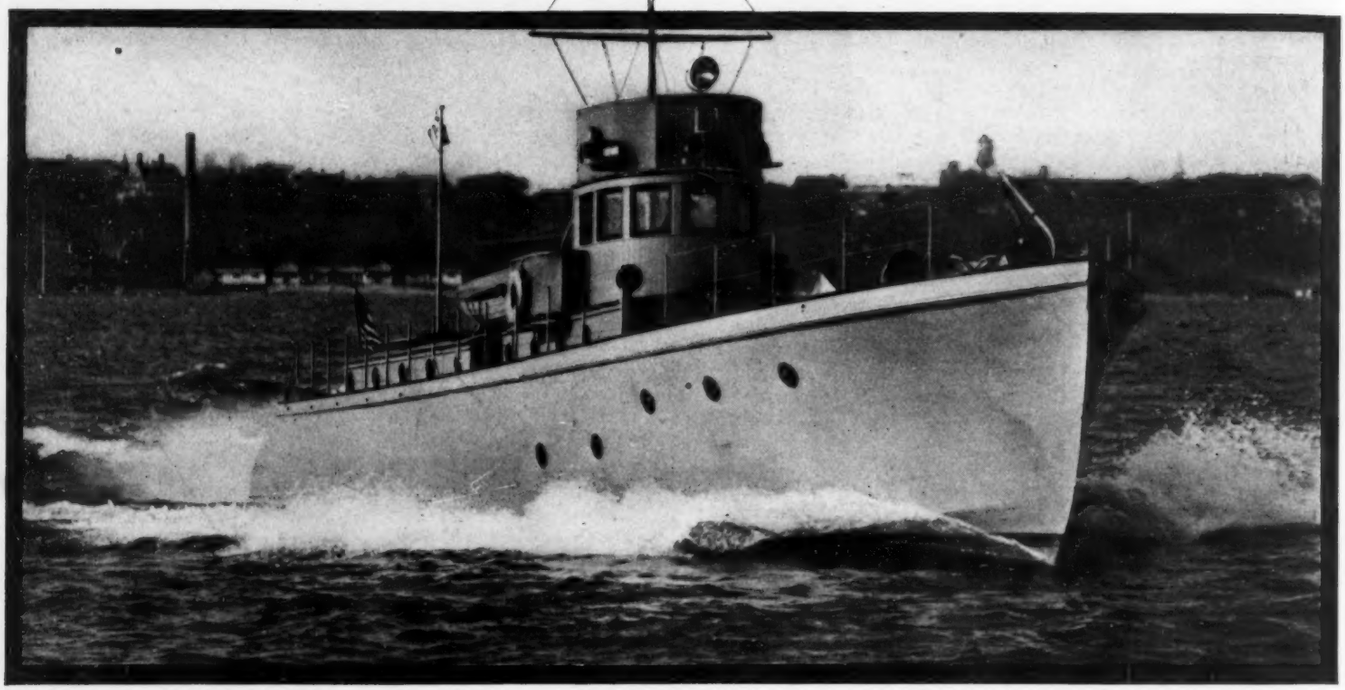
# A Delightful Cruise in a Comfortable Yacht



CONSUELO OWNED BY MR. J. PERCY BARTRAM IS A SUITABLE TYPE OF CRUISER FOR EXTENDED VOYAGES. SHE WAS DESIGNED BY J. MURRAY WATTS AND IS POWERED WITH TWO 6-CYLINDER SPEEDWAY MOTORS

THAT the boat may be made a very delightful means of traveling between one attractive port and another, is one of the charming phases of yachting. A good boat makes a comfortable home, where every convenience and luxury is within call, and the variety of the ever changing sea affords a grateful change from the monotony of everyday life on shore. Cruising owes much of its compelling charm to the independence which is so intimate a part of life aboard ship. All the pleasures of cruising may be enjoyed by the skipper of a small cruiser as well as in the largest yacht. Yachting includes them all and for a little interesting variety the pictorial side of a fast, luxurious and able cruiser is shown in the illustration.

# Rose-Mary of the Sectional Patrol



THE WAR HAS BROUGHT OUT A FLEET OF STAUNCH AND SPEEDY LITTLE CRUISERS WHICH ARE RENDERING VALUABLE SERVICE TO THE FLAG, IN THE DIFFERENT DIVISIONS OF THE NATIONAL PATROL

AT this season of the year when the summer fleet is snugly berthed for the winter, yachtsmen are wont to gather about the club fire and discuss the pros and cons of motor craft. Every skipper is likely to expound a distinctly individual opinion, for preferences and experiences must of necessity differ widely in a sport embracing so much diversity as motor yachting.

But the national service which the natty little fleet of patrol and express boats are rendering unto our beloved Uncle Sam, should make all designs suited to this strenuous duty of particular interest during these days of world wide strife.

A very interesting type of patrol cruiser has recently been delivered by the Great Lakes Boat Building Corporation of Milwaukee to Mr. R. E. Hackett of that city.

This sturdy sixty-footer is similar in appearance to the larger submarine chasers now under construction for the Navy Department. The complete manner in which the constructive details have been worked out, sounds an original note in adapting certain structural details from larger craft in a hull of this length. This has been accomplished by means of frames, steam-bent ribs and battens running from stem to transom, and backing up each plank seam.

The interior arrangement includes six compartments with the galley in the forepeak, followed by the crew's quarters, petty officers' cabin, motor compartment, captain's stateroom and junior officers' quarters.

The galley, forward, is carefully worked out and is fitted with ice box, range, sink and running water, and ample locker space is provided for dishes and provisions.

In the crew's quarters just aft the galley, are arranged two transom berths and two pipe berths. The petty officer's quarters is separated from the forecastle by a curtain and this is fitted with three built-in berths.

The engine room is amidships, with full headroom, and separated from the forward compartment by a water-tight bulkhead. Entrance to the motor compartment is made through a hatch, and the control is communicated through telegraph and speaking tubes. Fore and aft ventilators provide ample ventilation.

Over the motor compartment is the bridge deck with conning tower and look-out on the roof. The signal and wireless equipment are carried on a steel mast, and a 9-inch Carlysle and Finch searchlight, with helmsman control, is mounted over the conning tower.

The captain's stateroom is fitted with built-in upper and lower berths, and direct entrance is provided to a fully equipped toilet on the port side. Aft of the captain's cabin is the junior officers' stateroom, fitted with the same type of berths and a bookcase and lounging seat on the port side. Both staterooms are attractively finished in white enamel with mahogany trim. Adjacent to the officer's cabin is a fully equipped wireless room.

For the power plant two 8-cylinder Van Blerck motors give a speed of twenty-four miles per hour. This record is very satisfactory indeed, considering the heavy construction of the hull. The complement is for three officers and a crew of seven.

The design provides a large deck space and the main armament consists of a six-pounder, carried forward of the conning tower and mounted on a heavy foundation, reinforced to the frames and keel.

Mr. Hackett has entered his craft in the Third Naval District, which has its base at the Newport Navy Yard, and Rose-Mary is giving a good account of herself.

# Through the Canal to California

*An Account of a Cruise from Jacksonville, Florida, Through the Panama Canal, Thence to California*

By THE NAVIGATOR

At half past one, having taken on board Captain Wilkins, the pilot assigned us by the Captain of the Port, we started our engines and made for the entrance to the Canal. Our orders were to wait in the Gatun Locks for the Missourian, go through to Gatun Lake with her, anchor there for the night and at five in the morning precede the Arizonan to the Pedro Miguel Locks and wait for her there. This program we carried out, going swimming in Gatun Lake in the evening and starting away before daylight in the morning. The run across the lake and through the Culebra Cut in the early morning light was ideally beautiful, and we reached the locks at about eight o'clock. There we were held until nearly three o'clock in order to have four boats in the locks at one time besides the Lasata (she was too small to count). Hundreds of people came alongside and inspected us, hundreds of kodaks photographed us and hundreds of questions were asked and answered. Finally, as we came through the locks, we became the prey of two moving picture machines.

We ran out of Miraflores Locks and came to anchor at about half past five, half an hour ahead of the Arizonan and an hour ahead of the Pleiades, of the Luckenbach line, the first boat through in the other direction. We ran through entirely under our own power, being so small, though for the larger boats the electric "mules" were used, they, helping somewhat with their own power. These "mules" are curious looking beasts, being low-set electric cars, running close alongside the lock walls and equipped with steel towing lines with which they carefully haul the larger ships along.

Mr. James Forsythe, of the International Banking Company of Panama, met us and added a sixth to our number as we ran through the Canal.

As we lay in the Pedro Miguel Locks, waiting to go through, we quite inadvertantly broke the Canal regulations to fragments. The rigor of rules had been relaxed sufficiently to allow people on the lock walls while boats were going through, and hundreds had taken advantage of this relaxation. Seeing among them friends from Panama, we innocently asked them to come aboard and go through the Locks with us, which invitation they as innocently accepted. Later we learned that this made us liable to arrest and might have led to much unpleasantness, but for the navigation officers of the Canal who recognized that yachts were in a somewhat different class from merchant vessels taking on passengers.

The operation of the Canal is, of course, exceedingly interesting and is being admirably handled, though as yet it is so new that parts of it work slowly and with not quite the system characterizing all other details of the Canal. The shortest time in which a boat had been put through is eight hours, and they expect to take usually about twelve. The speed with which the immense lock-chambers were filled and emptied amazed us. These chambers are a thousand feet long by a hundred and ten feet wide, and the water rises at the rate of an inch in a second, five feet in a minute.

After the severe experience of the Caribbean, the Lasata's ship's company had no further desire for stormy waters, and heard with great delight the prognostications of the various captains, to whom they talked, to the effect that the Pacific would probably live up to its name. Especially were they pleased as it became necessary at Balboa, which is the official canal zone port for the Isthmus, to take on board 4000 gallons of gasolene, enough to run the Lasata straight through to San Diego, California.

It must be remembered that the gasolene capacity of the boat was only 1500 gallons in her permanent tanks, to which had been added in semi-permanent form six 50-gallon drums lashed on the after deck, giving an additional three hundred gallons. This left twenty-two hundred gallons of gasolene to be stowed some place or other about the ship.

This gasolene contingency had been foreseen before leaving Los Angeles as, at that time and on account of the revolution, it was known that the Mexican ports would in no wise be available for supplies of any kind and to this end the gasolene, put up in five-gallon tins and crated two tins to a wooden box, had been ordered from the Union Oil Company of California, to be delivered at Balboa, the price being 27 cents a gallon delivered on board the boat.

Circumstances proved that this gasolene, so purchased, was a very real asset, as the supply at Balboa was practically nil and the cost in the neighborhood of 60 cents per gallon. The stated reason for the difference in price of gasolene between Colon, on the Atlantic side of the Canal and Balboa, on the Pacific side, being the difference between 23 cents per gallon and 60 cents per gallon, was the freight rate via the Panama Railroad between the two points. This, of course, may be eliminated or reduced by the opening of the Canal itself, but should be carefully considered by any gasolene yacht making the voyage. Also it was fortunate that the gasolene had been contracted for "loaded on board ship" as there are no wharves at which a yacht can conveniently lie at Balboa, and further, all supplies which are not purchased of the Canal Zone Commissary must come from Panama City, some ten miles distant, and in the case of the gasolene the means of transportation was by two-wheeled mule carts carrying about fifteen cases to the cart. This transportation, and the subsequent transfer to the small launch of W. R. Grace & Co., all carried on in the heavy tropical showers of the season, was very slow and disagreeable and would otherwise have proved very expensive.

August 17th, therefore, was spent loading on board and into every possible hole and cranny the two hundred and twenty odd wooden cases of gasolene that were to see the Lasata well up the Mexican coast on the road home.

While these cases stowed very nicely, they were found to take up more room than had been anticipated and when the loading was finally completed the poor Lasata looked more like a Harlem River hay boat than a yacht. Cases were piled three deep on the after deck, were lashed in a long row across the forward deck, were stowed with the greatest of care under all the cabin floors, were piled as compactly as possible on the floor of the Overton's cabin and were lashed in a long line along the sides of the bridge deck. At that, there were thirty-seven cases over, which were piled into the life boats with the feeling that, if a catastrophe did happen, it would be of such a nature that nothing but an aeroplane or a feather bed would be of any material use.

In a diligent search for information as to wind and weather, going up the coast, the mate while on shore happened upon a Captain Drennan of the City of Sydney, of the Pacific Mail Steamship Company. This gentleman very kindly came aboard and, from his knowledge of some ninety coastwise trips, gave us information of the greatest value which, for the benefit of those who might make this voyage, I have transcribed in full at the end of this story, with the commentary that on the one occasion when we disobeyed directions and tried to cut across from Guionos Point to Corinto.

At high noon on the 18th day of August the Lasata found herself once again prepared for sea, but what a peculiar looking craft she was with great, tall stacks of gasolene, carefully covered by canvas tarpaulins and heavily lashed. We found that we had kept her trim very true, and that she

was consistently some six inches below her water line from stem to stern.

At 2 p. m. the proverbial pilot of the Canal Zone waters was washed aboard in the usual afternoon down-pour, and at three o'clock our lines were cast off and the Lasata proceeded to sea.

The departure from the Canal Zone on the Pacific side was indeed beautiful. Steep, volcanic islands are scattered on both sides and on one, the Island of Taboguilla, we passed the beautiful little town of the same name with its red roofs and large hotel. This pretty spot is the summer resort, or rest haven, of the over-worked members of the Canal Commission and is noted about equally for its excellent pine-apples and splendid bathing.

At 3:40 p. m. the last large gas buoy, marking the approach to the Canal, was brought abeam, the pilot was dropped with many expressions of good will, and the course of south ¾ west was set. By five o'clock, the afternoon rain squalls had passed away and all hands felt very proud of the behavior of the good Pacific Ocean, which ran smoothly by in long low swells.

Both passengers and crew fell back into their sea regime very readily, and, with the engines turning over easily at the rate of 334 revolutions, we found the boat, in spite of her heavy load, slipping through the water at a 10½ knot rate.

At 1:40 on the following day the Lasata reached her "furtherest south," arriving at Jicarita Island in latitude 7° 10′ where the course was changed to west, northwest, amidst the cheers of the populants who began already to feel, that they were practically home.

At dinner a great discussion arose over the assertion of Mr. McGilvray that he had seen a sea serpent and wanted the fact noted in the log book. The custodian of the log demanded, however, that a search of the "booze locker" be made to ascertain whether the gentleman's sight had been entirely normal. Search having been so made and all the Jamaica rum found intact, the sea serpent was formally entered. Luckily for Mr. McGilvray, his story was later confirmed by all members of the forward cabin, as a small species of snake, varying from two to four feet in length, and having yellow and black stripes for about half its length, seemed to abound in these waters.

It was at 9:30 p. m. on the evening of August 20th that the navigators made their first *faux pas* in disobeying the instructions of Captain Drennan. At this time Cuionas Point was brought abeam and, instead of laying a course close along shore for San Jual Del Sur, which lies on the low Nicaraguan coast across which the winds sweep from the Gulf of Mexico in a northerly direction and with great force, a course was laid direct for Corinto, bringing us some twenty miles off shore. At four a. m. we ran out of the light westerly winds which had prevailed to this point and immediately into a strong northerly blow which increased rapidly to half a gale under which the sea quickly rose to large proportions. At 4:30 the ship was headed inshore on a north east course and at nine o'clock, after a very rough five hours, we were close under the shore off San Juan Del Sur. At this point we were safe in standing up the coast toward Corinto.

It was about ten o'clock in the morning, with a brisk north wind snapping the spray from the wave crests, when we ran into a veritable sea of turtles, and for four or five hours passed them in great numbers and on all sides as far as we could see. They seemed invariably to be of the same size, probably two feet across the back. The boat, however, was making such splendid headway, (with all sails set to the favoring breeze) that we were loath to waste the necessary time to stop and lower away a boat in order to catch them. Many make-shifts, however, were devised, the most clever of which probably was that indulged in by the mechanically minded Mr. Chase who industriously heaved the ice tongs from the bow in the fond hope of snagging a turtle steak for dinner. This means was not quite as foolish as it sounds, as three or four turtles will carry well defined scratches for the balance of their very long lives.

Aft in the crew's quarters excitement was also rife, as large fish were jumping on all sides, and a white rag attached to a fish hook had enabled them to carry away three fishing lines, one after another, due to the size of the fish which took the hook, and the speed of the boat.

The coast along this stretch of the trip was particularly attractive. With the first of the morning light, the perfect conical form of Monotambo Volcano, rising to a height of 12,000 feet, almost from sea level, became visible. Later, as the sun got up, the thickly tropically wooded shores came into view.

At five p. m., once more in a quiet sea, the watch below was called on deck, and seven hundred gallons of gasolene were taken out of the wooden cases and stowed in the forward tanks. An estimate showed that the Lasata had now done 665 knots from Balboa, and that her fuel consumption was a little less than we had estimated. This made everybody feel particularly good as the gasolene question had been a worrisome one.

After a beautiful night run and a wonderful sunrise on August 22nd, we continued on up the coast of San Salvador, having run across the Gulf of Fonseca during the night. This coast was also varied by the great volcanoes of Salvador, Vincente and Miguel, from which we were able to take accurate bearings during most of the day. At 4 p. m., the red roofs of Acajutla, with its long wharf sticking out into the open roadstead of this little port, was brought abeam. At nine p. m. the lights of San Jose de Guatemala were sighted, and at ten o'clock the anchor was dropped off this port.

It cannot be said that any of these open roadsteads offer the conveniences nor comforts of a regular harbor, as the long Pacific swell makes an anchorage very uncomfortable and a landing almost dangerous. Upon sending a boat ashore it was found that an ancient iron-pile wharf made out, offering the facilities of a barnacle-clad ladder, which had to be grabbed at the top of a large swell and clung to with might and main as the boat from, which one jumped, descended into the trough of the sea. The mate finally got ashore, however, and returned with the glad tidings that the customs officers and doctor would be aboard at six o'clock in the morning, to enable the Lasatastans to catch the nine o'clock train for Guatemala City, which lies some 72 miles inshore and at an elevation of some five thousand feet.

Destiny hangs on little things. With the first of the morning light it was realized that the good ship did not have a Guatemalan flag to hoist to her fore-truck. The skipper remembered, however, that while in Jacksonville and in a department store he had purchased a bargain lot of silk emblems in the hope that some of them might be of use, whereupon the mate remembered that, having found the last of said emblems in a very dilapidated state on the cabin floor, he had given it to the cabin boy to throw overboard. Upon questioning the cabin boy, however, whose soul for souvenirs had prompted him to dry out and stow away the little silk rags, he proudly drew forth a Guatemalan flag! Considering the fact that nobody thought we had a Guatemalan flag, or if we had it it had been thrown overboard, this was considered to be rather pressing our luck. Any way, the emblem was hoisted up and ten minutes later the white whaleboat of the port authorities came alongside.

Beware, oh amateur navigator in these waters, as to these port officials! Meet them politely at the gang-way; conduct them carefully to the bridge, bowing and scraping to the best of your ability. If the ship has a band, or even a phonograph, play the national air "a tout tete." Get out the best cigars and the best liquor that the ship possesses, and you have done none too much. These small politenesses are highly appreciated and are repaid in kind.

Having already had some experience, the formalities were carried off with flying colors—referring again to the Guatemalan flag which we learned had saved us from the fate of an earlier visitor, who was delayed several days in avoiding a fine imposed by these same officials for not having so flown their national flag. Our bill of health was approved, our clearance O. K.'d and we were told by all means to accept the hospitality of the ancient wharf and the barnacle-clad ladder, and take the train at our very best pleasure for Guatemala City.

San Jose itself offers few attractions. A dilapidated string of weather-beaten buildings stretched for half a mile along the dark crescent of sand which forms the beach. A few ragged, undersized soldiers bearing firearms of the Revolutionary period watched us languidly as we walked down the wharf to the little railway station.

One agreeable surprise, however, was in store for us. The official consul of the town, a Mr. Savage (who, I believe, officiates for all known countries, and certainly does so in a very satisfactory manner) advised us that the price of a railroad ticket from San Jose to Guatemala City, being a distance of some seventy-two miles, amounted to some 60 pesos. From our Latin-American experience we presumed the peso to be worth some fifty cents gold, and $30, even for so attractive a trip appeared to be rather high. Upon explaining this to Mr. Savage, however, we were advised that the Guatemalan peso was worth only a nickle, there being neither gold nor silver currency in the country. Thus, our railroad fare amounted to only three dollars which, considering the fact that it took the puffy narrow-gauge little train eight long hours to wind its way up through the tropical jungle and past the volcanic lakes of the country to the Guatemalan city, was not so high per hour.

At the city itself we were quite surprised. It has a population of some seventy thousand. Its houses are built after the approved French or Italian pattern and its women are dressed, powdered and painted according to the very latest Paris modes.

And such women! The eyes of the masculine members of the ship's company fairly bulged as the party was driven along the Parado in the midst of a concourse of carriages and automobiles, occupied by the beautifully dressed inhabitants. In the evening we again returned to the Parado where the open stores and cafes were thronged, except for a change of dress, with the same crowd of the afternoon.

After the thorough plebeian style of the American, we became very well acquainted with our cab driver and learned, alas, that all was not gold that glittered. We were told that a rabid dictator ruled in this fair land; that almost yearly a determined attempt was made to rid it of his presence; that the people were oppressed, and only kept from open revolt by the presence of a large standing army.

While our information did not come from the highest channels, it was rather confirmed upon our return trip when we stopped off at the small city of Esquintla, midway between the capital and the coast. On the trip down we had made friends with the conductor of the train, an ancient Yankee whom twenty years of experience had regrafted into a pretty thorough Guatemalan, This gentleman told us that he had only that day caught two men stealing a ride on his train and that they would be sent immediately to the penitentiary where they would receive twenty-five lashes each morning for twenty-five days. This impressed us as a little barbaric, but we were assured by our affable friend that only the month before he had caught a man who had stolen some money on his train, and had been given fifty lashes for fifty mornings, resulting in the person's death.

At Esquintla we had the pleasure of meeting a cohort, phalanx or whatever the unit might be, of the aforementioned army. We were attracted by the off-key flare of a battered trumpet, and rushed out of the small inn where we were dining to behold ten or a dozen tatterdemalions lounging on rusty single-shot rifles and conducted by a tall officer in a fairly serviceable suit of over-alls. These guardians of the public welfare were being regaled by a small individual in civilian clothes who was reading a large document in a high pitched voice. We were informed, upon inquiry, that this was the method of introducing new laws and that the gentleman reader was informing the populace (who unfortunately were not present) of the latest edict of their Dictator.

Arrived back at San Jose, we immediately loaded aboard the fresh fruit and meat which we were here able to procure in good quality and at reasonable prices, together with a thousand pounds of precious ice, hove up the anchor and left.

About the only climatic features of interest to the seaman noted in this vicinity, are the regular afternoon rainstorms. These come off-shore, heralded by black clouds through which the lightning darts incessantly. The rain falls in veritable torrents, but luckily the whole disturbance is not accompanied by much if any wind.

We departed, therefore, from San Jose at 6:15 p. m., running almost immediately into the blackness of such a squall, which accompanied us up the coast well into the morning watch. In this storm the lightning was so incessant that a course might have been held very close along the beach which could be plainly seen at a distance of two to three miles.

The following day proved to be beautiful and we followed closely along the coast, working our westing gradually to the northward. We, luckily, were obeying the instructions given us by Captain Drennan and when at one a. m. on the morning of August 26th we ran into probably the most severe blow of the trip, we were well inshore and under the lee of the land.

Across the Isthmus of Tehuantepec the wind seemed to sweep with great ferocity from the north and while the sea did not get to dangerous proportions, on account of our proximity to the shore, the mere force of the wind was almost terrifying. This, and the fact that we wished to learn about Mexican conditions from an American warship, which we understood to be lying in the harbor at Salina Cruz, prompted us to anchor outside of the breakwater off this port. This we did at four a. m.

At day-break we made out what was evidently an American cruiser lying inside of the breakwater and immediately set signals asking whether we were safe in stopping at the various Mexican ports. The cruiser, however, for some reason best known to herself, failed to reply. Our presence and actions, coupled with the existence of the war, aroused such interest among the port authorities, however, that three Mexican tugs were sent to the mouth of the breakwater, which I should judge is only some three hundred yards across, where they completely barred our entrance.

After having vainly waited about an hour for some sign of life from the proud protector of our national dignity, we hove up anchor and departed in high disgust, running practically before the howling "Tehuantepecer." After having proceeded about a mile we spied a tardy signal flying from the cruiser and, inasmuch as we were now down wind and in a position where we could not make out the flags flying, we turned round and returned to the breakwater. We found that the signal read "what ship is that?" I doubt if Uncle Sam's navy will ever be fully reinstated in the good graces of the Lasatastans.

Forty miles from Salina Cruz we ran out of the heavy norther and proceeded in calm water for the rest of the day. In the evening the chief engineer reported that he had a chill and felt badly. We took his temperature and, to our consternation, found it to be 104½. He was immediately put to bed in the captain's stateroom and all hands assembled around the medicine chest to tell what they knew about fevers, the prize for the best knowledge going to the Spanish cook who said the chief had a touch of sun-stroke.

The captain took charge of the engine room and immediately the machines commenced to give trouble. Luckily the sea was perfectly smooth and continued so up until three p. m. of the next day, August 28th, at which time the Lasata was well up above Acapulco and standing along the coast some twelve miles off shore. At this time the barometer was noted to have dropped sharply and about a forty-mile breeze blew up from the northwest, soon kicking up a very rough sea. The Lasata's course was changed inshore, throwing the breeze some three points on the port bow, and the engine slowed to half speed. At eleven p. m. we were off San Telmo Point, but found the light unlit. The sea and wind had abated and we were able to continue at full speed. The barometer returned to normal.

At 6:30 a. m. on the morning of August 29th we rounded the bold headland which makes the southern shore of Manzanillo roadstead, and dropped anchor near the American cruiser Maryland. Since his first chill, the engineer's fever had steadily risen until, at three o'clock on the day previous, he showed a temperature of 105 6/10. Upon anchoring, therefore, the

captain immediately went aboard the cruiser and explained matters to the ship's doctor. He was told to "feed 'em quinine, you couldn't kill 'em," and departed rejoicing. The chief took the thirty grains meted out to him without a murmur (probably because he was delirious) and proceeded immediately to get better.

Manzanillo was found to be very much in a state of disrepair, the wharf being burned down and many of the houses destroyed. The town was held by the rebel forces, most of whom we found lying in the cool shade of a water car where the drip of an occasional leak relieved the monotony of the long time one had to live. The costume of the army was quite noteworthy, consisting of little, but from three to five cartridge belts strapped around the waist and over the shoulders and a nondescript hat with a brass No. 14 tacked on front. We noted, however, that the guns carried were of the newest and best make.

The Lasata with some trepidation was run alongside the destroyed wharf and five hundred gallons of water, together with some meat, eggs, and fresh vegetables were taken on board.

At 4:30 p. m. we left on the last leg of our long journey, and the next morning at daybreak a land-fall was taken off Cape Corrientes, and a course set across the Gulf of California for Cape San Lucas.

By this time the captain was getting quite masterful with the engines and decided that the trouble which had beset them since the inauguration of his regime was due to lack of spark. Both magnetos having gone wrong, it was necessary to shift the machines direct on to the storage batteries which served to light the boat, and from this time until our arrival in San Pedro the nights were illumined only by lanterns—but the machines ran perfectly.

After a very pleasant run across the gulf, the barren headland of Cape San Lucas, the extreme end of Lower California, was passed on the afternoon of August 31st, and the course was changed to northwest. Here both the scenery and the climate underwent a decided change. The rocky desolate hills came steeply down to the water's edge and the luxurious tropical growth of further south was entirely lacking; the brisk northwest wind no longer had its langour nor humidity but brought an insistent demand for woolens.

It had been our understanding that once off the Peninsula of Lower California, we would experience fine weather. This was very decidedly not the case. From the moment we rounded San Lucas until we ran into our own calm water of the Coronado Islands immediately below San Diego, we faced a wind which never dropped below twenty miles an hour, and for a great deal of the time blew about thirty and always from dead ahead. This wind seemed to blow hardest from eight o'clock at night until about four in the morning, being lightest in the afternoon.

Having passed the broad mouth of Magdalena Bay early in the afternoon of September first, we decided in favor of a little respite from the heavy head seas and ran into shelter under a great brown point marking the western side of Santa Maria Bay. Here the dinghy was lowered away and a landing was made through the surf in the hope that some turtles might be caught. Inasmuch, however, as nobody had ever seen a turtle on shore nor knew where to look for turtle eggs, the hunt was not successful. A great deal of fun, however, was had in catching large and active crabs which scuttled around in the shoal waters of a little lagoon immediately inshore. These crabs later proved to be delicious eating.

At six p. m. we again got under way and found the usual nasty head sea and wind off Point San Lazaro, and at twelve o'clock, midnight, in order to make any headway, were forced to throw the Lasata three points off the wind and further to the northward, taking us in toward the shore of Nameless Bay which we were crossing.

It was only at twelve o'clock, noon, of the next day that we were able to put the boat back on her course again, at which time we were close in to the beach. The coast was followed during the night and until five o'clock the next day, at which time the wind had very much abated and Cedros Island was passed.

Here the course was changed to due north, passing inside of the island. By seven o'clock the wind had again come up and by nine o'clock we found it necessary to heave to.

With her engines slowed to their minimum speed and with her bow about four points off the wind, the Lasata rode the stiff and breaking seas very easily. At one a. m. the wind had considerably abated and the first fog of the trip was encountered. The Lasata was put back on her course, and little by little, worked up to full speed.

During the following morning the fog cleared away at about eleven o'clock, and by two p. m. we were making fine headway between Cape San Quentin and St. Martins Island. At 7:15 p. m. Cape Colnett, a very abrupt head-land cut horizontally in the middle by a most peculiar formation so that the top side appeared to be perfectly black and the lower side perfectly white, was passed and almost coincidently the sea and breeze arose so that by 8:30 the Lasata was again hove to and riding over large breaking seas.

It must be confessed that by this time everyone was very anxious to get home, and the continual delays caused by headwinds and seas were becoming very annoying. Also, provisions were getting low, as we had already consumed two and a half days more time than had been anticipated between Manzanillo and San Diego. The extreme antics of the boat had gotten the greasy bilge water into the water tanks, which made a dry cleaning process necessary in lieu of the usual morning ablutions.

At four a. m., with sea and breeze somewhat subsided, we resumed our speed and at 10:30 a. m. the bold outlines of the Coronado Islands appeared through the morning mist.

All the way from Cape San Lucas, on the lower end of the Peninsula of Southern California we had remarked upon the desolate, barren appearance of the nude hills which rise abruptly from the water, but somehow or other, perhaps it was the mist, the Coronado Islands looked particularly good to all of us, and the festive whale seen blowing in the distance was given the enthusiasm of the usual fusillade of rifle balls which a target of this sort had invariably attracted during the voyage, because of a very marked spirit of thanksgiving on the part of the Lasatistians over the fact that their long voyage was about ended.

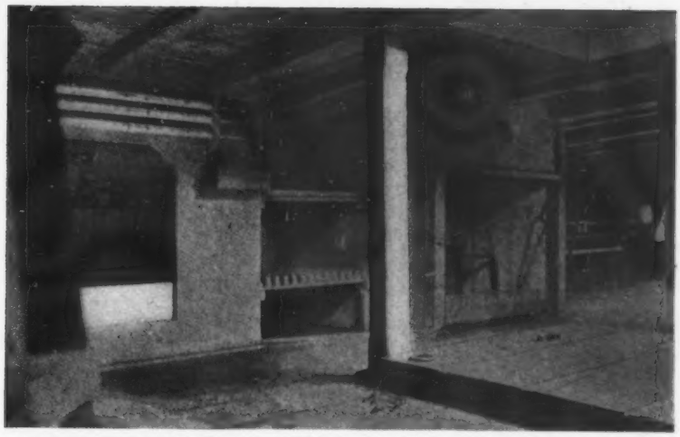
At almost precisely twelve, noon, on September fifth, the Lasata drew up alongside the quarantine wharf in San Diego Bay, where she was quickly given a clean bill of health and proceeded to an anchorage well inside the long quiet and off the Coronado ferry slip. Here we were greeted by Commodore Mitchell of our own yacht club, whose yawl happened to be also in San Diegan waters. A boat was immediately lowered away and a rather hysterical crowd piled on to the first street car, in which we had ridden since leaving Jacksonville, and went immediately to the comfortable old Coronado Hotel, where we ordered the best dinner which the management could supply.

At 10:30 p. m. we returned aboard ship, for what we now considered the little afternoon jaunt from, San Diego to San Pedro, a distance of about 90 miles. Having come a distance of a quarter of the way around the world, and having charts of the coasts and harbors from the headwaters of the Bay of Fundy to San Diego, it was found that we had no chart from San Diego to San Pedro. However, somebody or other remembered the course and a feeling of such security reigned, that the boat was put at full speed ahead from a course off Point Loma Light at 12:30 a. m.

At nine o'clock the following morning, in our own calm sea and under our own morning haze, we found ourselves heading straight in for the lighthouse on the end of the San Pedro breakwater, and at ten o'clock were anchored in the little bite of a harbor back of Long Beach, where we were received by a good many happy relations and friends.

And so the cruise of the Lasata ended, and when anyone asks us, as of course a great many do, whether we had a nice and interesting trip, we answer "yes we did" which, somehow, seems rather inadequate. Few people realize how far six thousand miles can be, nor what thirty-one days and

(Concluded on page 43)



COOKING ON THE HALF-MOON WAS DONE AT A FIREPLACE, AND THE COOK WAS OFTEN ROASTED AS HE TURNED THE SPIT

# To Cook and How To Cook, Is the Question

*Once upon a time a good fellow bade another of his friends to a breakfast. "If you will come you shall be welcome but I tell you beforehand you shall have but slender fare, one dish, and that is all!" "What is that?" the friend inquired, "A pudding and nothing else!" "Marry" said he, "you cannot please me better.....you may draw me around town with a pudding."*

By STILLMAN TAYLOR

WITHOUT a cheery fire with which to boil, roast, and fry, man would, according to some scientific minds, revert to the primitive order of things—civilization would take a slump and you and I would dine as the cave men of old, on a raw and juicy steak, or mayhap sup by chewing an uncooked fish. It is a far cry from the appetizing cuisine served on the natty craft of to-day, and the heavy bill of fare enjoyed by our prehistoric ancestors. A good dinner has become so important a part of our everyday existence that we have resolved into creatures of the eating habit. Of course we seafaring chaps "eat to live" (including us editorial folks, who are necessarily steeped in the briny atmosphere of the sea), while the mere landlubber often transposes the phrase and "lives to eat." But lucky sea-dogs that we are, we can cite good authority to back us up in no less a personage than Napoleon, who coined a truism when he said "an army travels on its stomach." We are not worms, neither do we crawl lowly about; but a good dinner is undoubtedly the proper sort of material to put pep in the human dynamo.

A clever French writer once remarked to the writer that "To prepare a good dinner you don't need expensive food, but an expensive cook." I am inclined to believe he hit the nail on the head. At any rate a good cook must have a good fire, and this brings us back to the how and why of our story,—the interesting and curious means of cookery aboard ships as ye Cooke of ye Olde Dayse knewe it.

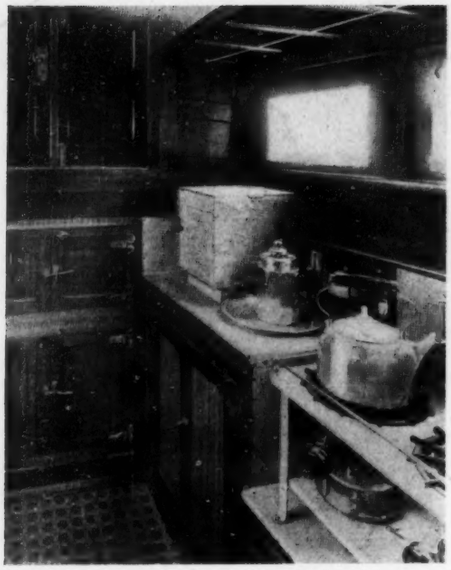
In the early epoch of boating, in the annals of the sturdy navigators who left port in the Old World and set sail to discover whatever lay beyond the shimmering Ocean that stretched out before, the facilities of preparing a meal by the ship's cook was no easy task. Ships like the Mayflower, the Speedwell, Santa Maria, and Hendrick Hudson's own gallant ship, the Half Moon, were all equipped with fireplaces. These fireplaces were almost identical with the Dutch fireplaces used by the Colonists, only the ship's "cooking niche" was somewhat smaller and limited room prevented the ingle nook seats on either side.

THE COMPACT CONVENIENCE OF THE MODERN SHIPMATE MAKES COOKING EASY ON THE UP-TO-DATE CRUISER

A brief description of the cook's quarters of the Half Moon is interesting and it fairly well describes all sailing craft of the period. The ship had two full decks. The uppermost one called the "upper deck" and beneath it the "tusschebdek" or 'tween deck. Headroom 'tween decks was cramped for there was scarcely four feet of space between it and the planking of the upper deck. The hawse pipes were in the fore peak 'tween decks and amidships were mounted on either side, two brass cannon with racks filling the space at the sides, to accommodate the many pike poles, cleaning rods, and wipers.

Just abaft the mainmast on the starboard side was a little pantry, the cook's bunk, and a small closet. In the corresponding position on the port side was the kitchen or galley. This contained a tiled fireplace, with brass-topped andirons, a pair of iron tongs, and a poker. A brass fire-chain suspended from the top of the fireplace held the pots and kettles over the fire. Outside the fireplace on a shelf, were kept a brass skimmer, brass snuffer and other cooking utensils. Under the shelf was stowage space for the peat and wood used for fuel.

The fireplace on the Mayflower was a recess about four feet wide, three feet high, and the same in depth. Across the back were bars of iron and on these bars were looped the iron hooks and chains of different lengths known as pothooks, trammels and hakes. The swinging iron crane so invariably associated with Colonial fireplaces, was unknown at this time, being a Yankee invention conceived during the year 1720.



FOR A SMALL GALLEY, A KEROSENE STOVE OF THIS TYPE IS OFTEN USED

Over the fireplace and across the ceiling timbers, hung strings of peppers, dried apples and rings of dried pumpkin.

The duty of supplying provisions to the passengers must have proved a difficult one, for in the log is mentioned that the craft was much overcrowded. Although the Mayflower like all other boats of this period, was built to carry passengers rather than cargo, and was of unusual beam compared to modern craft, the fact that so many must be served with food at about the same time, was very evidently a matter of protest by the cook, for we find that the few servants aboard were soon pressed into service to prepare meals, each taking turn over the fire.

Wheat bread was very little eaten in those early days and the hard bread or ship biscuit was usually made of rye flour. Fresh bread was baked on more or less rare occasions in a Dutch Oven. This baking device was a strong kettle standing on dumpy legs, and when in use was deposited among the hot coals and closely covered with a strong cover on which coals were heaped.

Pots and kettles were precious possessions and were made of iron and a kind of brass called latten. Tinware was little known, and all pails were made of wood, brass and iron, without bails or handles, the receptacle being carried by thrusting a stick through little ears on each side.

Roasting a joint of meat or a fowl, was accomplished in a primitive fashion by many ship cooks, by suspending it in front of the fire by a strong hempen string tied to a peg. The spit was turned by the cook who every time he basted the roast gave the string a good twist and it would untwist and then twist back again. All vegetables were boiled together in a big pot, unless a particular skipper provided his cook with an iron cage-like receptacle known as a vegetable boiler, which held the single vegetable in place in the big pot.

The grub list of the early voyagers presents a curious list to the modern epicure. Tea and coffee were practically unknown, beer supplying their places. "Strong waters" (Holland gin) and "acqua. vitae" (brandy) were relied upon for their supposed maintenance of warmth. By this be it known that our Pilgrim Fathers were by no means total abstainers and sadly bewailed when cruel fate deprived them of their usual beer.

Reliance was naturally placed upon articles of food not requiring heat, such as hard bread, Holland cheese, dried and smoked fish, meats and preserved fruits. Mush oatmeal, and a few vegetables like cabbage, turnips and onions are mentioned.

In the words of one Captain Josselyn, in a quaintly written log of his two voyages to New England, we are informed that "the common proportion of food for the sea to a mess (four men) is as followeth:—

Two pieces of Befe or 3 lb. (pork was evidently on the black list).
Four pounds of Ship Bread.
Four galons of Bear (beer).
With mustard and vinegar for 3 flesh days in the week.

For four fysh days to each mess per day.
Two pieces of codd or Haberline, making 3 pieces of a fysh (dried salt cod being divided into three pieces, two of these pieces were to be a day's ration for four men).
Four pounds of Bread.
Three-quarters of a pound of Cheese.
Bear as before.
Oatmeal per day for 50 men: 1 galon dry, and so proportionate for more or fewer.

Thus you see the ship's provisions is Befe and Fish, Butter, Cheese, Pottage, Water, Gruel and "six shilling Bear."

For private fresh provisions you may carry with you in case you are sick at sea:— Conserves of Roses, Clove, Ginger, Prunes to stewe, raysens, sugar, Pepper, Butter, Eggs, Rice, and Juice of Lemons, well pute up to cure and prevent scurvy."

Among many of the oddly written directions on the culinary art one of the recipes given would very likely puzzle a present day sea-cook. It is worth printing verbatum inasmuch as it is something of a literary curiosity.

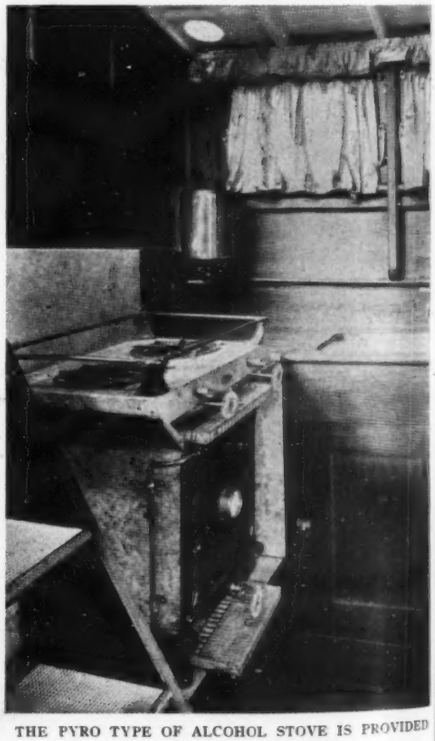
"HOW TO MAKE SHOES

Take a rumpe of beyfe and let it boyle an houre or two, and put thereto a greate quantitye of cole water and lette boyle together thre houres, then putte to them a couple of stockedoues, or teales or such wylde foule and let them boyle al together then ceason them withe salte and serve them forthe."

If the yachtsman will now don with me his seven-league boots and take a jump of something like four hundred years a striking contrast in cooking aboard ship bobs up. Cooking continues to be a very necessary phase of yachting, but with divers kinds of kerosene stoves, gasolene ranges, alcohol burners and ranges for utilizing wood and coal, cooking may be honestly listed as one of the conveniences of present day life aboard ship.

The question of choosing a handy and thoroughly serviceable stove, is really nothing more than observing a little discrimination when checking over the various kinds of cooking apparatus. The skipper of his first small craft is likely to pick out one of the various liquid fuel stoves. Compactness of stove and fuel, ease of lighting and absence of ashes, will appeal to him. The advantages of the Pyro and all similar stoves are many, and as the writer has used several kinds of liquid fuel stoves with satisfaction, the merits of these handy cookers deserve honorable mention.

But there is likewise a sentimental as well as a practical reason why many yachtsmen prefer to tie up to a stove or range that burns coal or wood. The skipper who has taken trips in the fall or early spring months, is not likely to forget the grateful warmth afforded by his little range. The liquid-fuel stove is a splendid little cooker, but its design is obviously unsuited for heating. Oil stoves serve well on shore, but in the small quarters of the average cabin these types of cookers and heaters quickly



THE PYRO TYPE OF ALCOHOL STOVE IS PROVIDED WITH AN OVEN IN ADDITION TO THE TOP BURNERS

exhaust the oxygen. The regulation stove is right here on the job, and while undeniably warm for the cook when the mercury rises in July abetted by a white-ash breeze, this unavoidable circumstance may be accepted as one of the vicissitudes in the life of a sea-cook. Dear reader I have been there, but let us draw the veil.

From data now available it appears that the first company to achieve a prominent place in manufacturing coal and wood burning stoves and ranges for vessels, was the Plymouth Foundry Company. The oldest date appearing on their ranges is 1865 and the latest 1886. At this time they were practically the only concern in their field. In the year 1879 The Stamford Foundry Company of Stamford, Conn., introduced a small coal range, called the Yacht Range. The following year four sizes of this range were brought out, and in 1881 the first model of the famous Shipmate Range appeared on the market. From a single size, the line gradually extended until Shipmates were known over the greater part of the maritime world. Other sizes were added to include ten models and during the present year the line of Shipmate Ranges is complete from No. 1 which is but 18¾ inches long, all the way up to any length desired. By an ingenious system of section-units the 5-ft. model, known as No. 65, may be combined with a three-foot section to make an eight foot Shipmate. By attaching an additional section the eleven-foot Shipmate is formed. By using these stove units any length of range is formed to meet every requirement of the ship's galley, in progressive sizes from 6, 9, 12, 15 feet and up.

THE CHEERFUL WARMTH AFFORDED BY A SHIPMATE IS APPRECIATED BY THE YACHTSMAN WHO LAUNCHES HIS CRAFT EARLY AND HAULS IT OUT LATE IN THE YEAR. IN THE PICTURE IS SHOWN A SHIPMATE ABOARD MR. WINFIELD THOMPSON'S CRUISER TWISTER

The generous size of the fire boxes in the large sizes are usually fitted for burning hard coal, but by means of special fixtures soft coal may be utilized. As the front of each fire box is provided with a convenient door, the fire is readily sliced from the front.

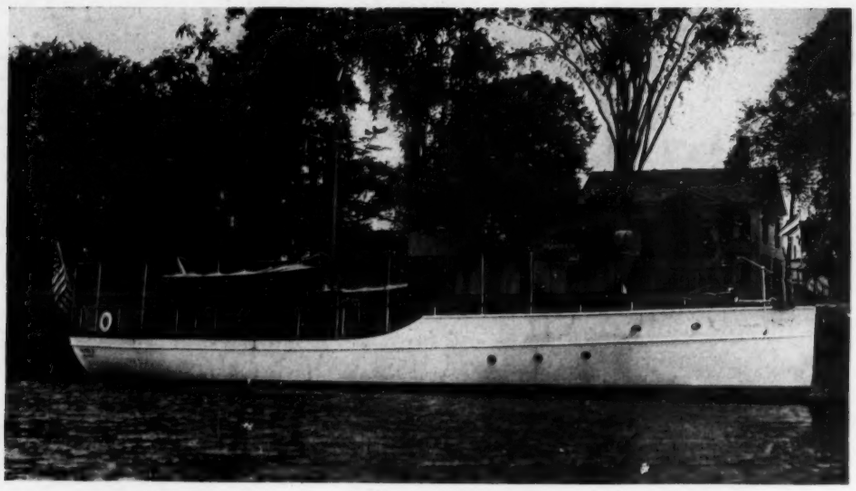
Shipmates now comprise the largest and most complete line of ship stoves made in this country. If your next stove is a Shipmate take the advice of one who knows and get a good cook—the combination spells a happy voyage.

BY MEANS OF AN INGENIOUS SYSTEM OF SECTIONAL IRON UNITS, THE LARGER SIZES OF SHIPMATE RANGES MAY BE EXTENDED TO PROVIDE A STOVE OF ANY DESIRED LENGTH

# The Periscope's Limitations

IT is a well-known fact that at a height of one foot from the water an object can be seen at 1.32 miles; at six feet elevation the range of vision is increased to 3.23 miles, while at ten feet the horizon is increased to 4.16 miles. This in clear weather puts great limitations upon the sight of a submarine periscope, as all allied merchant vessels are keenly on the lookout for such. From the above it is also very evident that air craft have extraordinary value in scouting for submarines, as at 25 feet elevation an object can be seen 6.59 miles away; at 100 feet, the range of vision is increased to 13.17 miles; at 500 feet, the line where sea and sky meet is 29.45 miles away.

At a mile high an aeroplane has a range of vision of 95.7 miles. At this height, with powerful telescopes, an aircraft can sweep an area of about 300 miles. In order to distinguish the camouflaged vessels of the Allies, the Germans have fitted their latest periscopes with ray filters, which clearly bring out the outlines of such otherwise invisible vessels and in this respect the periscope is supreme.



A ROOMY DECK-HOUSE IS ONE OF THE DISTINCTIVE FEATURES OF THIS 65-FOOTER

# A Yachtsman's Cruiser, Frances III

A VIEW OF THE MAIN CABIN REFLECTS COMFORT AND CONVENIENCE

UP on the Harlem river whose tide is continually being worried by the passage of tow boats, of barges, of canalers and in the summer by hundreds of motor craft, there is a boat yard that is quietly plugging along and turning out motor craft of every type; little boats and big boats for pleasure and for the grim business of war, the latter full bodied able craft with triple screws and high free board, a steel pilot house and guns, but among all the fleet there building is one of great interest just now, for she is a typical motor yacht built for pleasure and without any indication in her make up of the naval type that has become so popular these last few years.

This boat is Frances III and she was built by the very yard we are talking about, that of the New York Yacht, Launch and Engine Company, and her owner is Mr. E. M. Jennings of Bridgeport, Connecticut.

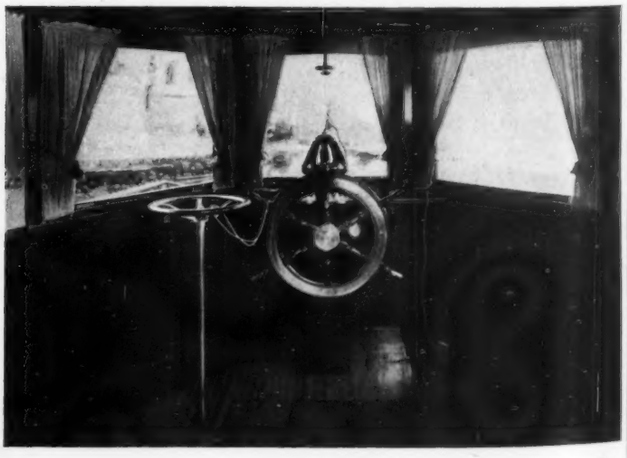
One of the features of this boat is the roomy deck house, for under it there is lots of room for generous sized cabins. There is a galley placed about mid-ships with a main saloon aft, having sideboard and locker against the forward bulkhead. The balance of the space under the trunk cabin is divided into two staterooms each of which is completely furnished with built-in berths and equipped with washbasins, dressers and all those things needed for the comfortable accommodation of guests.

Frances III is 65 feet over all and has a beam of 14 feet with a draft of 4 feet and her power plant is a Twentieth Century motor.

## After All it is the Engineer

WHAT of the engineer at sea? Do we ever give him a thought? We read with avidity all about the captain who brought his ship safely to port, we think

(Concluded on page 49)



THE PILOT-HOUSE IS FITTED WITH LARGE WINDOWS AND ALL CONTROLS ARE CLOSE AT HAND

# CAPTAIN JERRY SAYS—"IF YE WANT A SPORT WITH PEP AND TANG, BUY A BOAT"

*JERRY JONES is a friend of mine, a very good friend. Jerry is likewise a boatman graduated from the old and practical school of experience. He began his nautical career at the tender and impressionable office-boy age, which is somewhat less than twenty and a trifle over eleven years and nine months. Of course Jerry was filled with ambition and had a very definite Ideal, which in this late hour of civilization is admittedly very strange—unusual, in one so young. At the age when many youths are burning with a desire to stimulate the sale of a popular brand of Turkish smokes Jerry chewed plain, juicy 'baccy. This shows, better than words of mine can express, that Jerry was a sensible boy. It is to this admirable virtue that we may reasonably attribute his future, for strange enough, Jerry did not aspire to become a financial celebrity through the perspiring, progressive steps of the office-brat. He possessed thou perceiveth, much discriminating acumen. At any rate Jerry had a vision that led him away from the brick-walled town in quest of a glorious adventure, and the setting was the green-blue vista of the rolling sea, topped with a clear blue dome, and flecked with scudding clouds.*

*Now, when a young chap like Jerry, with plenty of pep and a whole lot of physical punch, makes up his mind to jump that human burrow, misnamed a town, the inevitable just naturally happens. It so did, and our young Jerry went out as a handy boy aboard a fisherman, who regularly punched her nose between Gloucester and the Grand Banks.*

*For many years our hero followed the ups-and-downs of a fisherman's life, and after experiencing to the full the responsibilities and triumphs of skipper, and owner, my friend slipped his moorings one fateful eve and married a red cheeked lassie. The prism of life now reflected another angle and after a few voyages Jerry settled down to enjoy the tranquil life on shore, fishing a little, partying a little and drawing twenty-five bucks from Uncle Sam every thirty days, for keeping the post light on the breakwater burning.*

*Now Jerry has a start on me by some thirty years and my positive love for the water coupled with an uncontrollable propensity for hanging around any sea-dog that would stand for it, led to a chummy acquaintance between the aforesaid Jerry and 'lil me.*

*It was apropos of nothing but a desire to hear him talk that I casually asked Jerry what he thought about motor-yachting as a sport.*

*"If ye want a sport with pep and tang get a boat, me lad."*

*"Any kind of a boat?" I inquired.*

*"Any craft will serve, but a clean easy hull and a spankin' ingine will make a flying-fish from any lubber. Sails be fit service for any man, and I know the luck acomin' from Lowell Duck, but ye don't want to blanket the ingine, me lad.*

*"Some will stick to the kites through fair and foul, and 'tis a good choice as any sailor will say, but ye need the kicker to give the impatient fellers a chance to show their heels. I ain't much of a racing man, but I kin see the 'pint of the feller who itches to take the helm of them speed machines. And them that doesn't want speed, kin build a croosier and jog along from port to port. If ye can't raise the wad to launch a big boat, ye can get a natty little one.*

*"Boating, me lad, is a sport for ye and me and all that likes the water. It's me business and me pleasure and I ain't tired of it to speak of. But me advice boy is to get a neat craft with clean and easy lines. Ye can put sticks in her if ye wants or an ingine as ye choose, but get a good boat in its class—a boat that floats and an ingine that motes."*

*Of course I grinned at the rhyme but Jerry went on unmindful of the slight interruption. Cap was on a long leg of a favorite tack, and the wind was—well, quite sufficient.*

*"Take them rich fellers who go to Floridy when the birds shift port. It's a fair spot to winter in is Palmy Beach, St. Agoostin, down the Key and up the Gulf to Ten-thousand Isle, Punta Rassa and Tampa. I know the waters well, and ye can use the gun and catch a trip of fish if ye want to.*

*"A good boat me lad, is like a good wife, always on hand when ye are in need and the poor skate of a box will beach her bones with Davy Jones."*

*"Which is the second offence," I chided. But Jerry was fast reaching for the home port with start sheets and with a fair wind abaft the beam he went sailing on.*

*"The boating game is the game for all. The lads and lassies kin handle a sneak-box and a dory with the best of us.*

*"Yachting, me lad, is the universool sport; no one too old to enjoy it, no one too rich, nor agin so lightly heeled that he can't man his own little ship. But come, mate, the lobbies are on the board and the missus is a-callin'."*

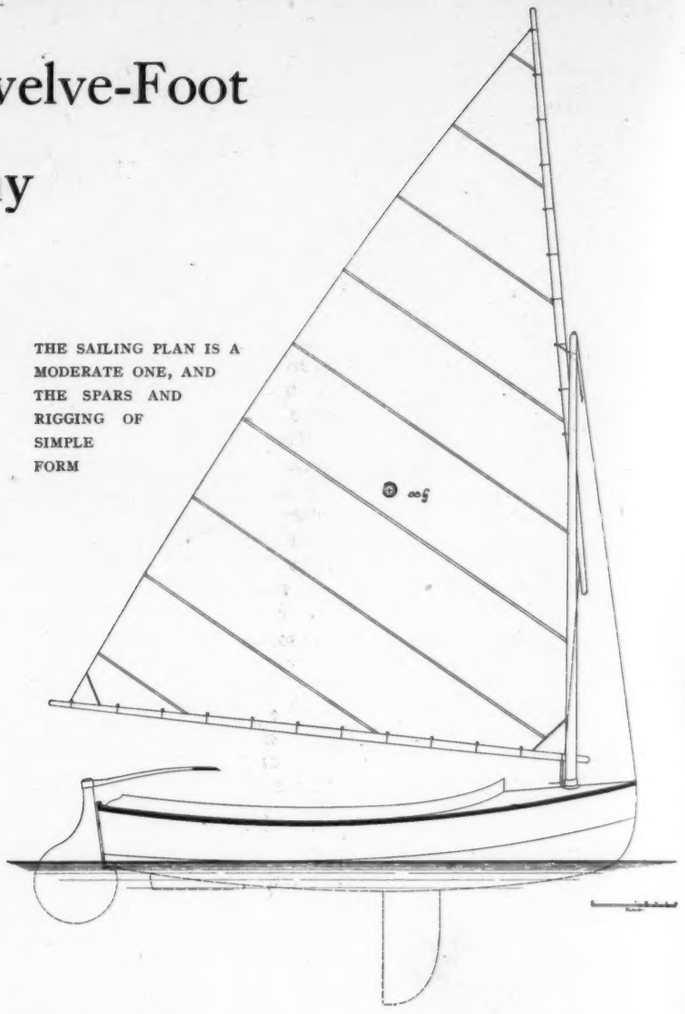
*And Jerry is right in his appreciation. Yachting has many phases—a recreation replete with greater variety than most sports can encompass.*

*The season for visualizing just the right kind of a boat to meet your need is now here. Contrary to the general opinion, government work has not prevented builders of hull and motors from taking care of the yachtsman. If you have never experienced the thrill of a thirty miler, nor served your trick at the wheel of a sailing craft, an early opportunity should be grasped to remedy what Jerry would term "a neglected idikation." But to be sure that your boat will be ready when you want it, your specifications should be put in now, that the early spring rush may not interfere with a perfectly corking time next summer. A pleasant voyage, shipmate!*

STILLMAN TAYLOR.

# The Building of a Twelve-Foot Sailing Dinghy

*The next yachting season will see the little boat coming into its own, and because* YACHTING *feels that there are great possibilities in the creation of a fleet of small sailing motor boats, it is publishing the plans of this 12-ft. dinghy; a boat that may be easily built by the amateur and for very little money. Designed especially for dual use, the little vessel will perform well when under sail or by urge of an outboard-motor*



THE SAILING PLAN IS A MODERATE ONE, AND THE SPARS AND RIGGING OF SIMPLE FORM

GERALD TAYLOR WHITE

WITH gasolene at its present price, providing you can get it at all, there is a distinct movement toward the small comfortable type of sailing craft that can be fitted with a motor for auxiliary purposes, and that will use a minimum amount of fuel. The average outboard motor will run for two hours or more on a gallon of fuel. The amount of lubricating oil is ridiculously small, and the upkeep charges for repairs so low that a thin pocket book is ample for their correction.

Originally the outboard motor was designed for rowboats. It was supposed that it was easier to sit back and let the motor do the work. From personal experience with the outboard machines of years ago I am of the opinion that it was easier to row than it was to keep one of the "coffee mills" running. All this has been changed. Not only is the outboard motor a reliable little piece of machinery, but it is being used extensively for auxiliary powered sailing boats.

A small boat is the crying need at the present time. Materials and labor are way up in the air, and the cost of a thirty or forty-foot boat is beyond the reach of the thousands of young fellows who have the boat bug bad but also have a limit to their pocket-books. It is exactly this class of men that are needed in the game. The finest sailors in the yachting world are men who have graduated from small sailing boats.

The little boat shown in the accompanying plans is about as small as a boat can practically be and still be safe for ordinary summer weather. Being V-bottomed she can be built by anyone who can use carpenters' tools. I have not deemed it necessary to go into building directions as thoroughly as I usually do for boats of larger size, for I feel that if you will carefully study the various plans, you will be able to visualise the actual way the wood should be worked to obtain the proper result. The various constructional features are all shown in one or more plans. The shaping of the boat is the most important step, and the best way to do this is to lay down the lines full size on the floor. Do not think that the laying down of the lines is a purely amateur process. The best of the professional builders have to lay down the lines of every boat they build.

PRESUMING that your shop is already laid out, and that there is a clear fairly smooth floor space at least thirteen feet long by seven feet wide, it is only necessary to clean up this space and snap a chalk line seven or eight feet long on the floor as near the lower edge of the space as possible. This line will be used as the center line above which the other lines will be drawn. Now measure off exactly twelve feet along this line and divide the distance into six 2-ft. spaces. Be sure the measurements are right. Now take a large carpenter's steel square, the larger the better, and lay one arm even with the base or center line, and extend the 2-ft. marks you made up about 6 ft. above the center line. In saying up or down I am naturally not speaking of up in the air, but away from the center line on the floor. When these 2-ft. sections have all been extended upwards, check up the accuracy of your squaring by measuring their distances apart at the upper ends. Now start at the right hand upright and number it station 0, the next 1 and so on. The last station will be No. 6. About 3 ft. above the center line, and parallel to it, draw another line. This line will be used as a base line from which the profile of lines will be erected. Twelve inches above the upper line draw another parallel. This will be called the water line of the boat.

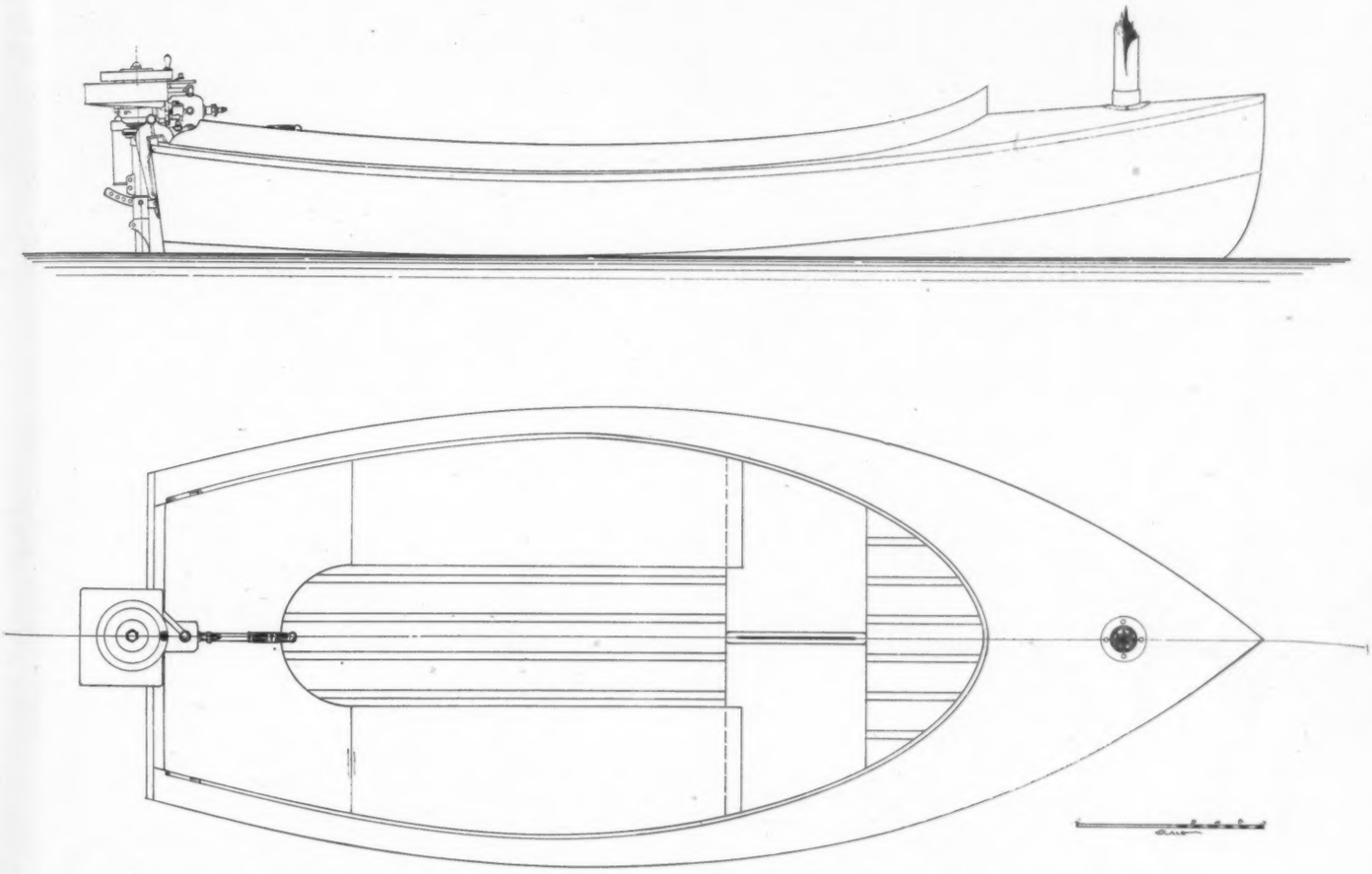
Before you go any further you will have to obtain a strip of clear soft wood, not less than 14 ft. long by about ¾ in. wide and ½ in. thick. It is very necessary that this strip be in one piece and as free from knots and bad spots as possible. This is called a batten and is used to draw in the curved lines. Start at Sta. 0 and make a mark 1 ft. 9 in. above the water line at

that station. That mark will be the top of the stem. 9½ in. below the top of stem make another mark on the station. This will be the forward end of the chine. 5½ in. aft of the station line, and on the water line, make another mark. This will indicate the crossing of the line of the stem. 6 in. above the water line the forward side of the stem is 1½ in. abaft the station mark, and 12 in. up the stem is ½ in. aft. Indicate all these marks and proceed to station No. 1 and lay off as follows, remembering unless otherwise mentioned all the measurements are upward from the base line and are in rotation, i. e. if I say 4 in. and 3 in. and 9 in., I mean to measure up 4 in. and then an additional 3 in. and then 9 in. more, a total of 1 ft. from the base. Keeping this in mind the measurements for station No. 1 are 7 in. and 11¼ in. and 10 in. Station No. 2 measures 4½ in. and 10⅛ in. and 10¼ in. Station No. 3 measures 4⅛ in. and 8½ in. and 10¼ in. Station No. 4 measures 5⅛ in. and 6¾ in. and 10½ in. Station No. 5 measures 7½ in. and 5 in. and 11¼ in.

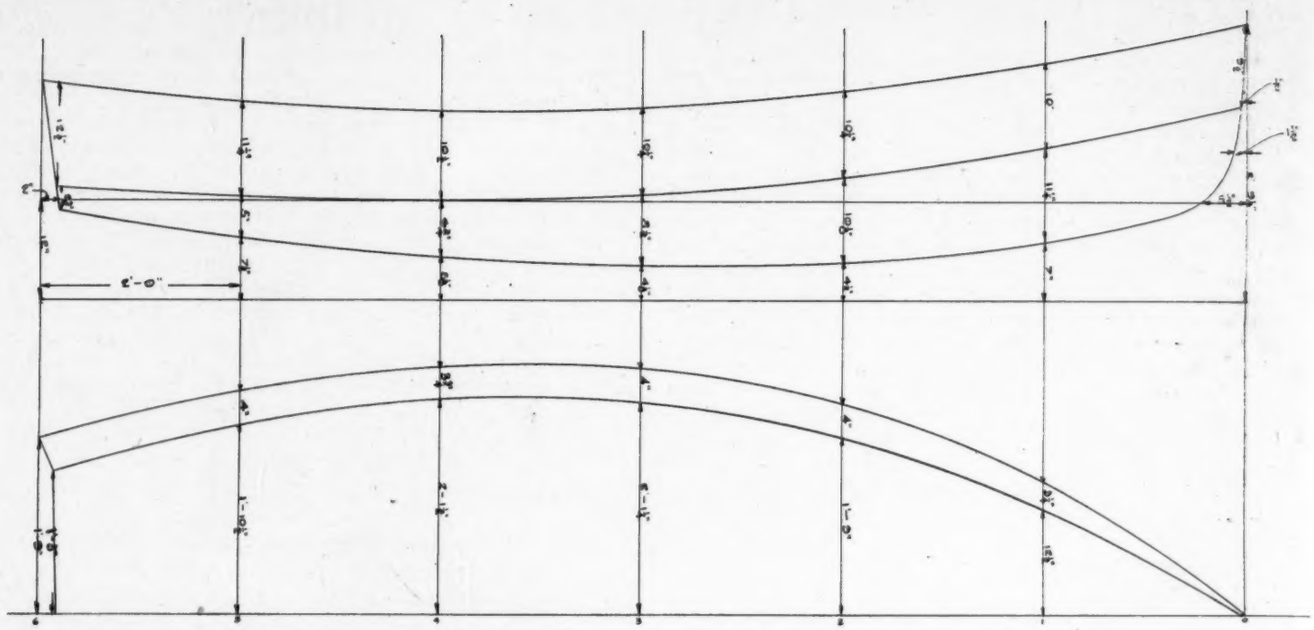
Owing to the fact that the transom is slanting, the measurements will be as follows: The top will touch station No. 6 14 in. above the W. L. The bottom will be 1 in. below the W. L. The slant will be such that the line crosses the W. L. 2 in. forward of the station 6. Measuring downward along the line of the transom the chine mark will be 12½ in. down. You are now ready to run the sheer line, chine line and keel bottom line. Tack the batten to the floor, starting from station 3, so that one edge of the batten is even with the chalk mark indicating the sheer at that point. Gradually move the ends of the batten upwards, tacking it in the proper place at every station and working from amidships forward and aft. When you have it all tacked in place, you must sight along it very carefully to see whether the line is a fair even sweep without any sudden humps or hollows. If the line is not fair you should withdraw the nail at the offending spot and let the batten spring into proper shape. When sprung to your satisfaction, draw the line with chalk. Now draw in the chine line and then the bottom of the keel. The curve of the latter at the bow where it sweeps up into the line of the stem, will probably be too sharp for your batten to bend around, so draw as far as you can and then sweep in the rest of the curve with a thinner batten.

The profile of lines is now complete. The plan of lines is much simpler, as there are only two lines to draw. The inner line is the chine, and the outer the deck. At station 0, there are no offsets, at No. 1 the measurements are 12½ in. and 3¼ in. At No. 2 the measurements are 1 ft. 9 in. and 4 in. At No. 3 the measurements are 2 ft. 1¼ in. and 4 in. At No. 4 the distances are 2 ft. 1½ in. and 3¾ in. At No. 5 the distances are 1 ft. 10½ in. and 4 in. At the stern the distances are as follows: The width on deck at the station line is 1 ft. 9 in. The transom point is 2 in. forward of the station line at the center line, and the outer end is 1¾ in. forward 1 ft. 5 in. out from the center. Connect all these points together with the batten drawn lines.

Now draw on the plan of lines, the outline of the keel. Naturally this will be drawn only half the width of the finished keel, for the centerline divides the boat in half. The actual width of the keel is to be 4 in., so lay off 2 in. distances up from the center line all the way from aft to station No.



MR. WHITE'S 12-FT. DINGHY IS A SUITABLE CRAFT FOR EITHER SAILING OR MOTORING, AND WITH THE ATTACHMENT OF AN OUTBOARD-MOTOR IT WILL MAKE A SERVICEABLE MOTOR CRAFT

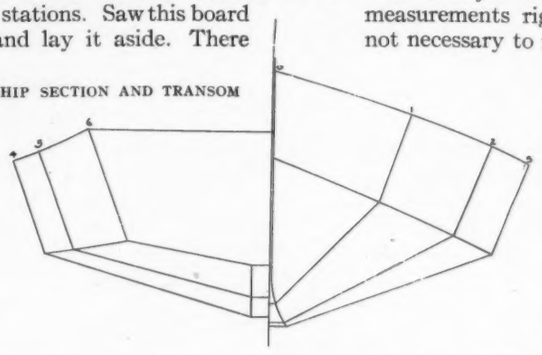


BEING OF THE V-BOTTOM TYPE THE BOAT IS EASILY LAID DOWN AND ITS CONSTRUCTION IS SUCH THAT ANYONE WITH A GENERAL KNOWLEDGE OF WOODWORKING TOOLS CAN BUILD IT

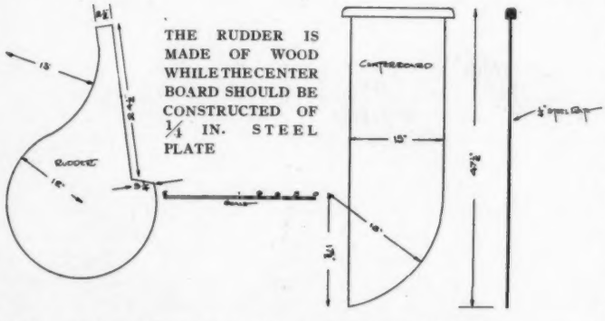
2. From here forward the keel tapers to a width of 2 in. at the stem. To get this taper lay off 1 in. at station 0 and use the batten for the curve, running fair into the 2 in. line at station No. 2.

The location of the centerboard slot should now be marked on the keel outline. This slot runs from 3 in. aft of station 2 to 21 in. aft of the same station. The slot is to be 1 in. width, so the width of the slot that will show on the lines will be ½ in. Now sketch in the stem and the parts that make it up. It makes no difference whether you follow exactly the plans here or not. A lot will depend upon the material you are able to get. I would not advise using any piece in the making of the stem parts that is any smaller than that shown on the plans. The knee that supports the transom will have to be very strong. Its fore and aft arm must be 11 in. or 12 in. long, and its upright arm as near that as will be allowed by the bracket of the motor you are to use. When these parts have been sketched in on the floor you are ready to build the moulds. In the first place it will be necessary to have a long plank set up on edge for the keel to rest upon. This plank should be 12 ft. long by at least 11 in. wide, the bottom edge should be straight, and the top edge curved to fit the keel. This curve is obtained by drawing the 2 ft. station marks and then using the straight edge of the board as the base line and measuring upwards the same distances as the keel bottom is at the various stations. Saw this board to shape and lay it aside. There are to be five body moulds, one for each station. It will be easier to get these moulds right if you make a paper pattern for each one on heavy wrapping paper. Of course it is only necessary to make half of each mould, and then turn the pattern over and make the other half of the mould similar. At the bottoms the moulds should be as wide as one half the keel, at the chine and sheer the same as the lines. A little study will show you how easy it is to get these measurements right from the floor. It is not necessary to make a set of moulds that will have to be thrown away after the boat is planked, for you can make the moulds from the frame material and fasten them together permanently. The specifications give full directions for this work.

THE MID-SHIP SECTION AND TRANSOM



THE RUDDER IS MADE OF WOOD WHILE THE CENTER BOARD SHOULD BE CONSTRUCTED OF ¼ IN. STEEL PLATE



Set up the keel mould on the floor and run braces from it. Place the keel plank upon it, and temporarily fasten in place. The remainder of the work is described in the following specifications:

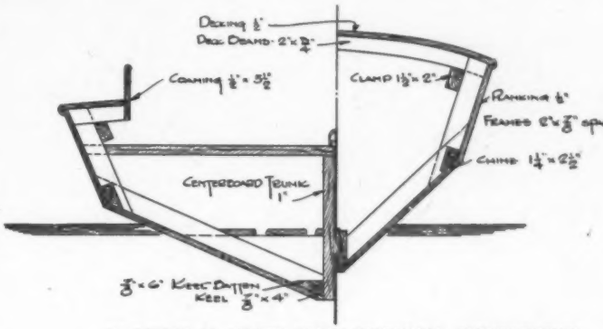
KEEL: The keel is to be of oak finished ⅞ in. thick and 4 in. wide except at the forward end where it tapers to 2 in. The keel plank is to be 9 ft. long from the after edge of the transom. The center board slot is to be cut out as directed on the plans.

STEM and Stem Knees: These parts are to be made from 2 in. oak, substantially as shown on the plans. The stem proper is to be at least 4 in. wide and the lower piece to be 6 in. wide at the widest part. The rabbet for the plank ends is to be roughly cut before the stem and parts are mounted on the keel. The finishing of the rabbet can be done as the planks go on. All stem parts are to be fastened together, and then

to the keel with ¼ in. galvanized iron rod rivetted over washers, or similar diameter bolts with nuts and washers. Before fitting together the joints must be trued up exactly square and painted with thick lead paint. In the angle of all joints that open to the outside there is to be a soft pine stopwater ⅜ in. diameter driven through from side to side. All joints must have at least two through fastenings, and one or more screws placed in the ends where the wood is not very wide.

STERN Knee: This knee is to be of 2 in. material cut to shape as shown. The horizontal arm should be 12 in. and the upright arm about the same. The fastenings to the keel must be of through bolts or rivets. The fastenings to the stern knee must be the same as those used for the keel and its parts.

FRAMES: The frames are to be of oak ⅞ in. thick and 2 in. wide. Each frame complete, consists of five parts. Two side frames, two bottom frames and one cross frame or floor. The various parts are to be fastened together with 2 in. galvanized boat nails with the points clinched over on the inside. The frames are to be placed 12 in. apart from center to center.



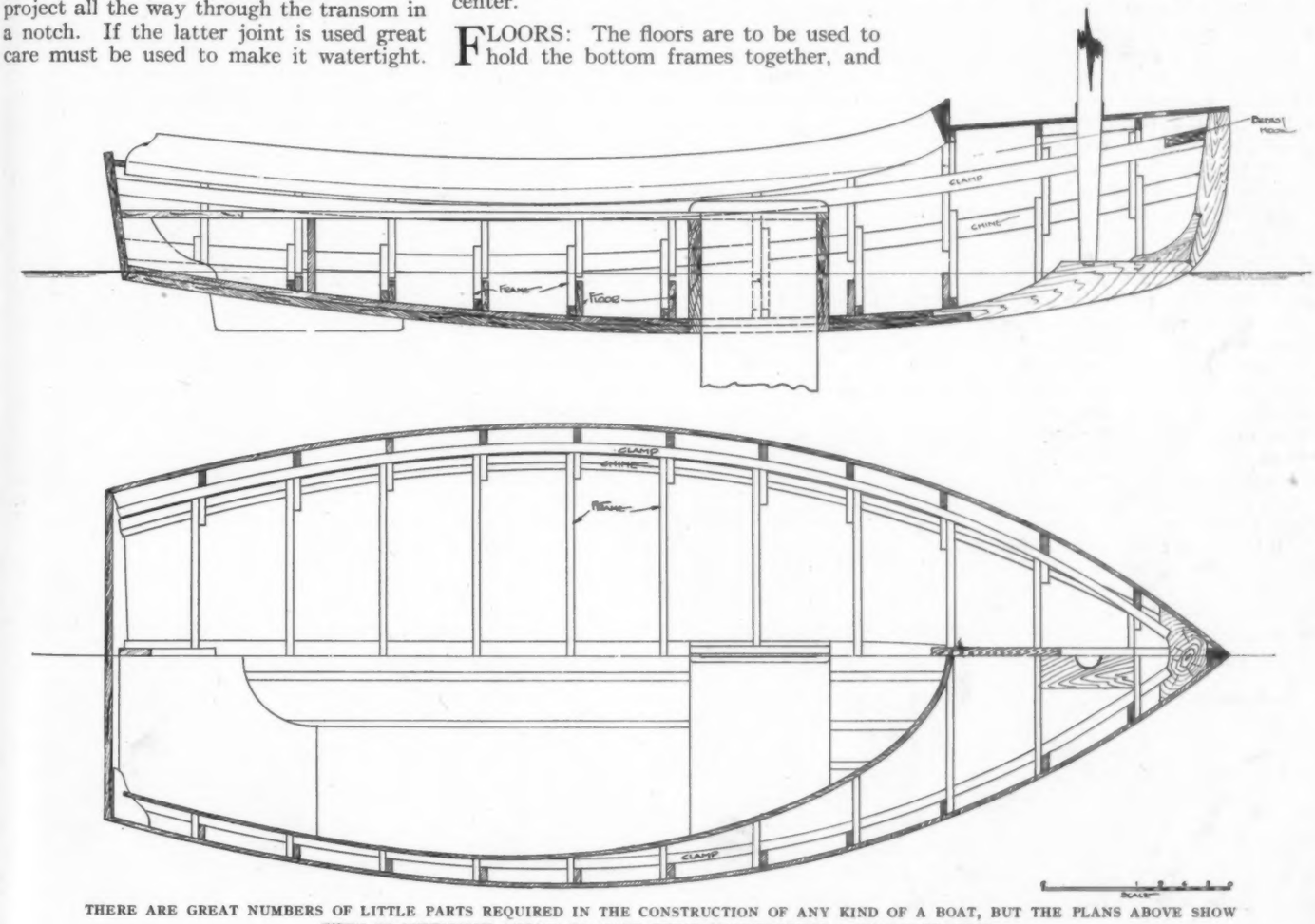

IN WHICH IS SHOWN CROSS SECTIONAL CONSTRUCTION

TRANSOM: The transom or stern board is to be of oak 1 in. thick and shaped as per measurements taken from the lines. The joint where it joins the keel can be on an angle as shown, or the keel can project all the way through the transom in a notch. If the latter joint is used great care must be used to make it watertight.

FLOORS: The floors are to be used to hold the bottom frames together, and also to form a base for the cockpit flooring. They are to be ⅞ in. thick and of a width that varies. To determine the width of each floor it is necessary to measure on the profile of lines that is on the floor the distance from the bottom of the keel line to the water line, and then deduct 1¼ in. The result is the width, or depth, of the floor at that station. The floors are to be fastened to the frames with clinched boat nails. No fastening is to be more than 4 in. away from another fastening. You will note on the plans that aft of the center board trunk the floors are fastened to the forward side of the bottom frames and forward of the trunk they are on the after side. The floors must each be fastened to the keel with a through bolt passing through floor and keel.

CHINE: Instead of running the chine in one piece full length, in this boat, the chine is composed of pieces of yellow pine that will fit tightly between the frames

(Continued on page 48)




THERE ARE GREAT NUMBERS OF LITTLE PARTS REQUIRED IN THE CONSTRUCTION OF ANY KIND OF A BOAT, BUT THE PLANS ABOVE SHOW THEM IN SUFFICIENT DETAIL TO MAKE THEIR MANUFACTURE A SIMPLE PROCESS

HERE we are publishing sketches of bucolic Teutonic children, all of them flying kites, and this in a Yachting paper! But as our subscribers are interested in the various phases of the world's great war it seems not amiss. We can truthfully say that the letter and sketch accompanying it are unique. It is a grand little idea anyway and is typical of the ingenuity of the German people. The sender Herr Helmer is a subscriber of YACHTING and his niche in the sun is the flourishing city of Dusseldorf.

"As you know I have been interested in kite flying all my life, and since the war started, I have been associated with the Herr Captains Von Siegsfeld and Von Assmann both alive, as I am, to the creation of a kite corps to work in conjunction with our other air forces, and through our joint efforts the supermen who control our cantonment, have come around to our point of view and realize with us that one of the best ways to protect our cities from the barbarous bombing attempts of allied airmen is to raise above them a mesh of kite strings and kites.

"All Germans are gripped by the military spirit, and for a long while the Emperor has felt that the school children were being left out of the war that is bringing glory and honor to us as a nation, and so to-day every soul in the Empire, from babies to grandfathers, are working with a will to keep alive the ideals of Trietzsche and Bernhardi, so the children of all the cities of Germany are, therefore, trained to be superchildren in the handling of war kites, just as they are super trained in every other activity into which they are led.

"I can tell you that it is a wonderful sight and a touching one to see these well fed government fostered children produced by kultur, grouped about in companies under the gentle guidance of a Prussian guardsman, each with a ball of string and a soaring kite. From the sketch you will notice that each of these kites has suspended from its lower end a cage-like appendage in which there is stored a hand grenade containing a charge of 25 pounds of extremely high explosive.

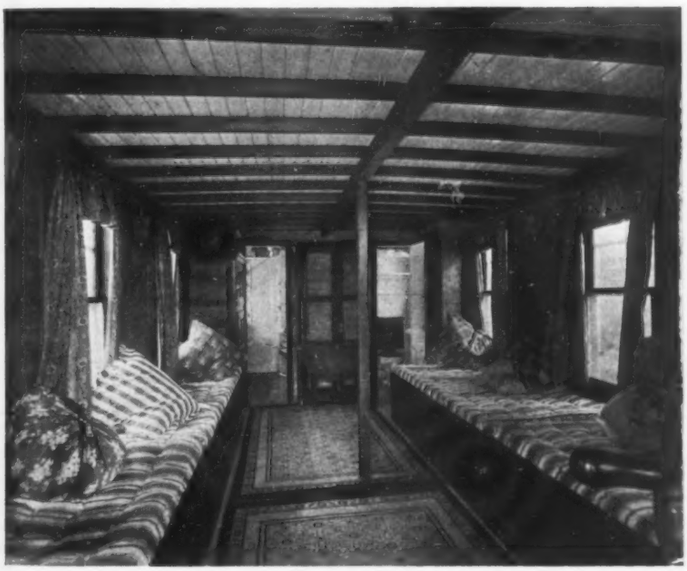
"You may not believe it but I have seen the eyes and the lips of the statue of Elector Johann Wilhelm that stands in the Altmarkt, smile with joy as it visualizes the pretty picture of one of those dreadful flying British-barbarians or of a silly Frenchman winging his way against the almost countless kite strings and artfully loaded kites of our happy German children.

"Now and then, of course, a kite breaks loose or becomes entangled with another, or in rare cases the loaded appendage breaks loose, which in a way is unfortunate as when they strike the ground they do considerable damage, and now and then a toddling trooper of the kite corps is blown into Kingdom Come, which is a great misfortune as the Emperor needs every one of these children to help defend his Throne against the attacks of our greedy enemies. However, the mother of a child so instantaneously blown into the land that no one knows, is handsomely rewarded by the bestowal of two iron crosses, one of these to be hung above the picture of the Kaiser that adorns the wall of every German home, the other to be worn on the right breast of the bereaved mother. Surely this is ample compensation and should allay the pain produced by the rapid passing of her child.

"With this spirit we must win the war!"

A UNIQUE CRAFT IS JUNK, BUT WITH ALL AN UP-TO-THE-MINUTE ONE BOTH AS TO LIVING ACCOMMODATIONS AND SPEED

# Father Noah Owned The First Houseboat



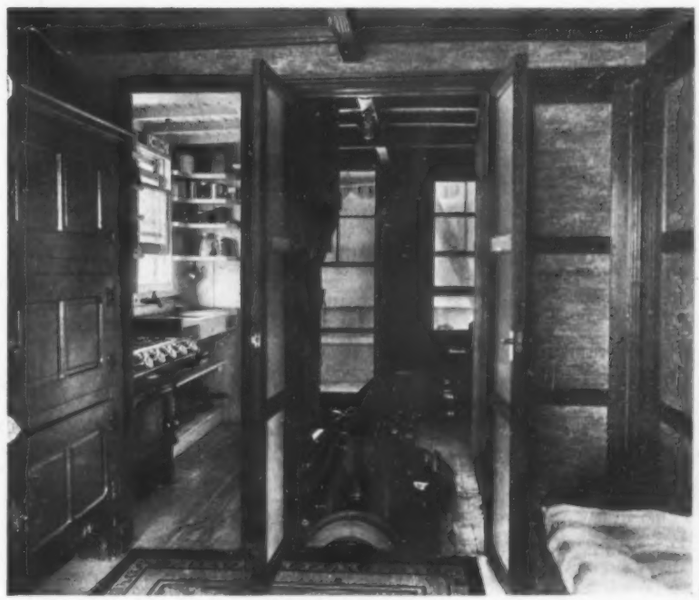
THE CABIN IS WELL SUPPLIED WITH ALL OF THOSE FITMENTS THAT SPELL COMFORT, AND SPELL IT IN CAPITAL LETTERS

THE launching of the first houseboat was a momentous occasion away back in the dim past, and no other form of yachting is so fortunate as to possess a precedent of the same magnitude as houseboating, for the patriarch Noah was the first skipper and the craft was known as the Ark. Now the word "ark" is sometimes used by irreverent scribes in a depreciative sense when referring to a tubby, a lop-sided wabbly, or antiquated craft. But while the dust of antiquity has buried all details of the domestic lay-out and existing dates fail to indicate what motive power was supplied in the original model, Noah was reputed a man of much wisdom and sense, and we may feel sure that the Ark was a pretty good houseboat for the time and place.

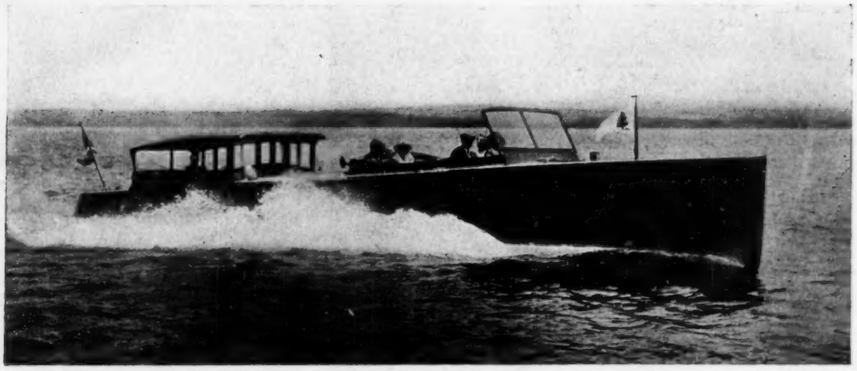
From the days of the historic craft, evolution of the houseboat has proceeded somewhat slowly, but at last has produced a houseboat which is particularly well designed to serve its purpose. The charm of a life aboard a roomy comfy craft with its informal independence, appeals to many who take a two month's vacation in a lump, and likewise to some business men who want a "week end" boat.

In England and particularly on the Thames river the houseboat has long been recognized as an institution, and the beauty of the slow moving, winding Thames, with its copses of beach and oak, its cathedral spires and picturesquely grouped thatched-roof cottages, could not fail to stimulate interest in this comfortable way of boating.

In China it is estimated that a very large proportion of the inhabitants of cities like Hongkong, dwell on houseboats, and con-



THE MOTOR IS HIDDEN AWAY BELOW WHERE IT PURRS AT ITS LABOR OF PROPELLING JUNK AT A FAIR CRUISING SPEED



SYLVIA, A SEDAN RUNABOUT, IS A TYPE THAT OFFERS EVERYTHING IN THE WAY OF SPEED AND WITH-ALL IS A MIGHTY COMFORTABLE KIND OF BOAT

gestion of several other cities is so great, that gardens are built on rafts to gain a bit of much needed room. If Canton, for example, was a modern city, the subways would beyond doubt be utilized for the purpose.

We Americans have no occasion to imitate our Chinese shipmates, but the scenic beauties of our waterways affords a good reason for houseboating. The Hudson is an ideal water for craft of this kind, and along the Sound on the Connecticut shore, from Stonington to Stamford, and on the south side of Long Island from Orient all the way up Peconic Bay, is found plenty of safe anchorages and attractive vistas for the voyager. Waters like Jamaica Bay, Rockaway Inlet and Sheepshead Bay, are likewise charming resorts near the city, and down east in the Vineyard are many quaint old seaport towns well worth knowing. The waters of Florida are too especially suited for enjoying the *dolce far niente* existence of houseboating, and the abundance of fish and game furnishes plenty of sport for gun and rod.

There are many forms of houseboats, some large and in design and arrangement closely resemble the bungalow built on shore. Other types may be described as double-decked motor yachts. Sometimes the craft is fitted with power, and again it floats lazily with the current, or perhaps towed wherever the skipper's desire may lead by a motor propelled tender. Much or a very little may be expended on the craft, but the pleasure of the sport may be as well supplied in a cheap little home-made shack on pontoons, as in the most luxuriously furnished affair.

And a very interesting and unique craft of the houseboat family is Junk, a 40-footer, designed and built for Mr. L. W. Tuller of Detroit. As the illustration well shows, Junk is a modern conception of the Chinese junk. Despite its odd exterior this craft is provided with a very comfortable interior, with big roomy berths and large lockers below to hold bedding, etc. The galley more nearly resembles a modern flat than a galley aboard ship, and is fitted with every cooking convenience.

Junk is a self-propelled boat and the 6-cylinder Von Blerck motor, installed in the stern and turning a 24-inch propeller at 1000 revolutions a minute gives a speed of ten miles an hour.

## Water Motoring In A Runabout

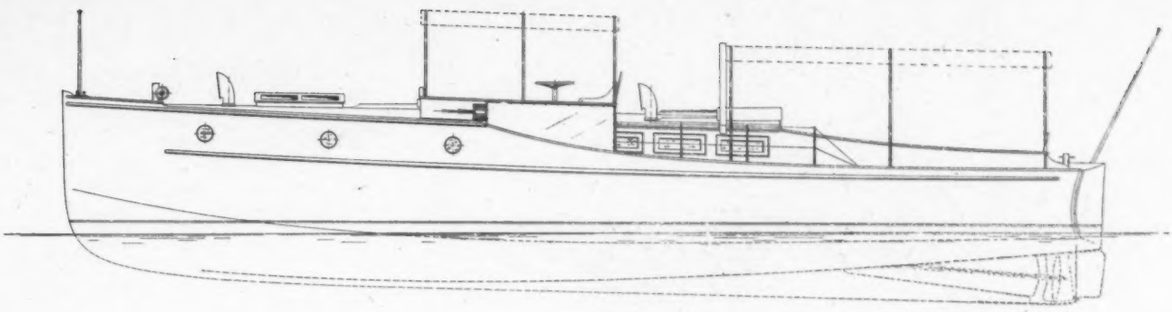
WHEN the sun shines bright and the ripples on river, lake and stream, dance and sparkle under a clear blue sky, there are but few men viewing this fair scene who do not wish they had a boat. And there is no logical reason at all why the wish should not be gratified. The boat building industry is so well organized today that no one having a desire to own a boat need be denied. It is comparatively easy to find among the large variety of stock boats, just the type of a boat that will afford the most pleasure. If the yachtsman wishes something different and distinctive, designers and builders will co-operate on demand and turn out a made-to-order craft to suit any preference.

Among many designs, the fast little runabouts pictured in the accompanying attractive photographs, picture two very useful and popular designs. In one is shown Hazel-Nut, a finely finished and comfortable runabout, operated with all the ease of a modern motor car. Provision is made for seating eight with comfort and the power plant, consisting of an 8-cylinder 5½ in. by 6 in. Van Blerck motor, maintains a speed of 35 miles an hour. Hazel-Nut was designed and built by the Albany Boat Corp. for Mr. Wm. Rich of New York City for use at Saranac Lake, where it has attracted considerable attention as a classy little craft.

Of a different design is the 48-foot Sedan runabout Sylvia, built by the Great Lakes Boat Building Corp. for Mr. L. C. Thomson of Hamilton, O. As the picture indicates, this distinctive craft is a happy combination of a fast and seaworthy runabout with the accommodations of a day cruiser. Sylvia is powered with an 8-cylinder 6¾ in. by 7¾ in. Duesenberg motor and on her trial trip developed a speed somewhat better than 38 miles an hour. This design is of the wave-collecting type with seam-battern frame and is double-planked, with the inner skin of cedar laid diagonally, and the outer skin of mahogany laid fore-and-aft. The arrangement plan embraces the latest practice with a fore cockpit to which all controls are carried. The cockpit is roomy and affords accommodations for eight, while a wind shield and auto-top provides protection whenever desired. The motor compartment is just aft of the cockpit, and the sedan cabin with glass lights makes a very attractive lounging place. Lavatory conveniences are provided and a refrigerator is built-in at the forward end.

Considering the very high standard of construction and finish these boats are reasonable in price, and the fact that quite a number of boats of similar designs were built during the past season, and orders now at hand indicates a much larger number for 1918, which may be taken as a good index of the interest shown in the fun of motoring on the water in a speedy runabout.

HAZEL NUT. A GLORIFIED RUNABOUT OF THIS KIND IS THE FINEST KIND OF CRAFT TO KEEP ONE OUTDOORS, AND IN LUXURIOUS COMFORT



# A Hand-V-Bottom 45-Footer

ONE of the new cruisers for 1918 is shown herewith. This boat was designed for Mr. W. Lyman Underwood of Boston by William H. Hand, Jr., of New Bedford, Mass., and is now nearing completion in his shops.

The plans provide an unusually attractive boat with excellent speed and accommodations combined in a hull of strong construction and very stable seaworthy lines.

The deck arrangement provides a wide bridge deck just forward of amidships and a cockpit aft which may be completely closed by a windshield and a navy type awning which may be dropped to deck on each side quickly and easily. Between the cockpit and bridge on both sides there is a wide deck passage properly protected by a wire railing and it is not, therefore, necessary to go below through one passage and out the other, or to climb over deck obstructions, to get forward and aft, which is the case in many small cruisers.

Forward under the raised deck is the main cabin with toilet and galley. Under the trunk is a motor room with the crew's quarters and toilet. The motor room is particularly well arranged and the power plant is so placed that all parts are readily accessible in a compartment with full headroom.

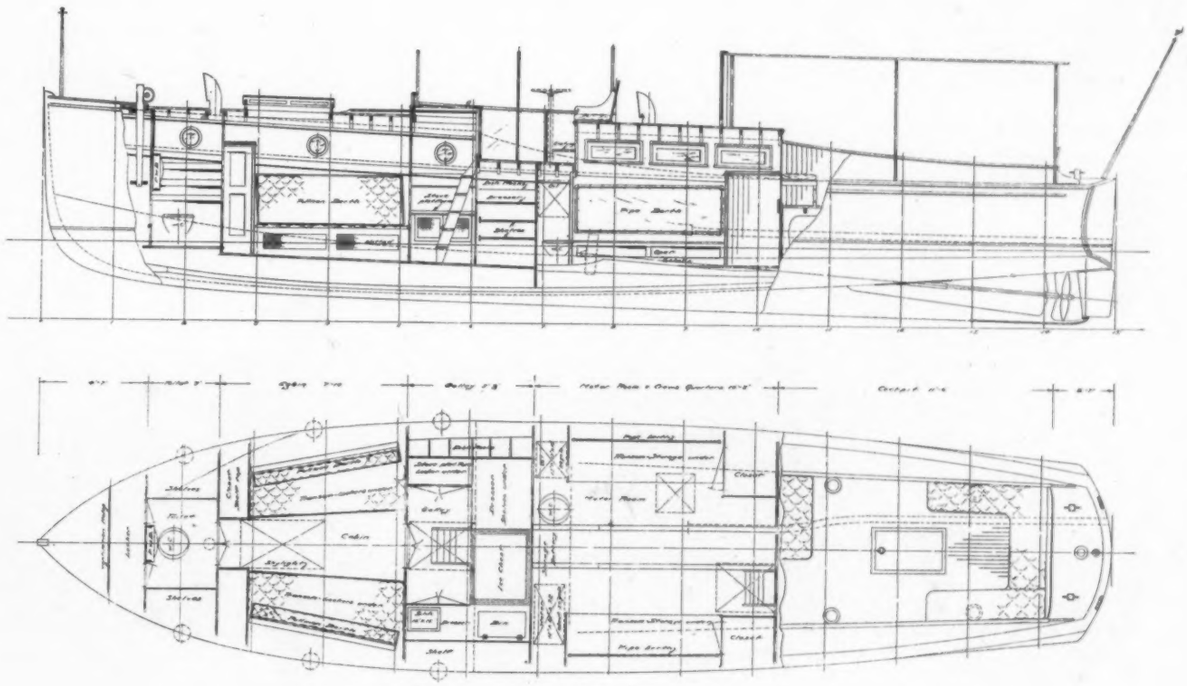
The motor is a six-cylinder 6 in. by 6 in. Van Blerck installed with automobile control and is electrically started, while the boat is electrically lighted throughout.

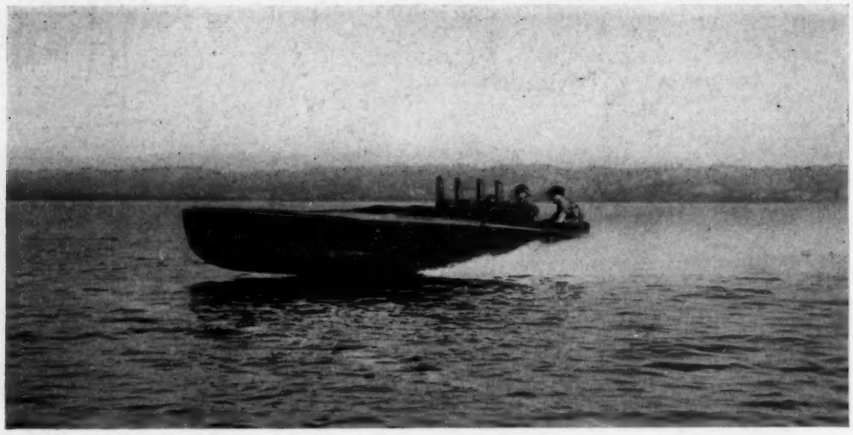
Mr. Underwood's new boat will make her headquarters at Nonquitt, Mass., and will be used principally in the waters of Buzzards Bay and Vineland Sound. She will be in commission early in the summer of 1918.

The dimensions are: length, 45 feet; beam, 10 feet 6 inches; draft, 3 feet.

## Seventy-six Years Old, Still Going Strong

THE bark Charles W. Morgan, said to be the oldest whaling vessel in the world, entered the harbor of New Bedford, Mass., the other day, with a cargo valued at $30,000, consisting of 1,100 barrels of sea elephant oil and one hundred barrels of sperm oil. The vessel is seventy-six years old. She was navigated by her captain and owner, Benjamin D. Cleveland, through the far southern Indian Ocean. It seems a bit strange, in these modern days, to read that not until August 8th, when she touched at St. Helena on her return voyage, did her skipper learn that the United States was at war with Germany.





THE DEVELOPMENT OF THE HYDROPLANE HAS HAD GREAT EFFECT ON THE DESIGN OF HIGH SPEED MOTORS, AND THEIR RACING HAS DONE MORE THAN ANY OTHER THING TOWARD PERFECTING THEM

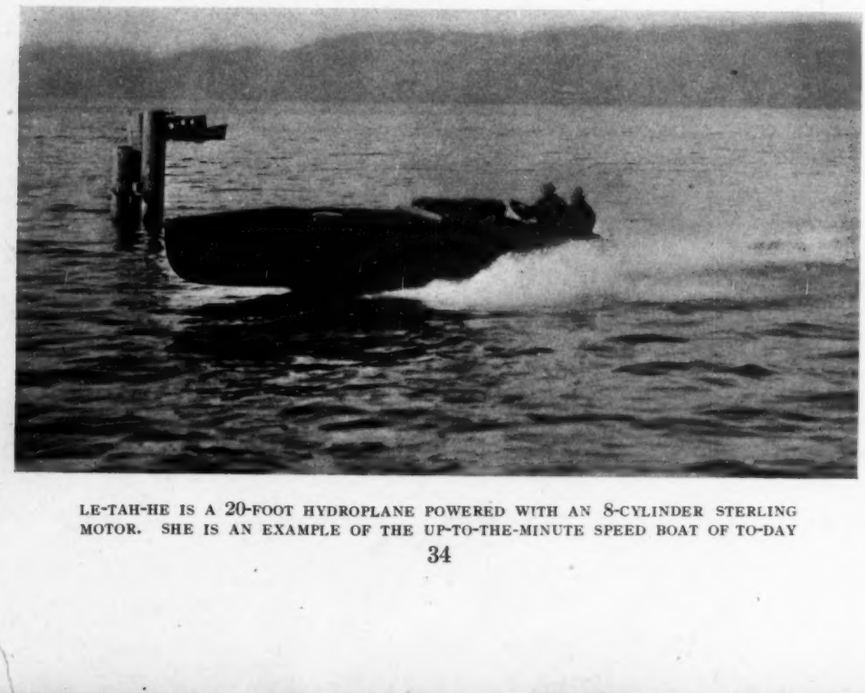
# With a Burst of Speed

*Motor speed contests on the water are the only means we have for showing up the weaknesses of both power plants and hulls, and their encouragement should be fostered by every man who owns a boat*

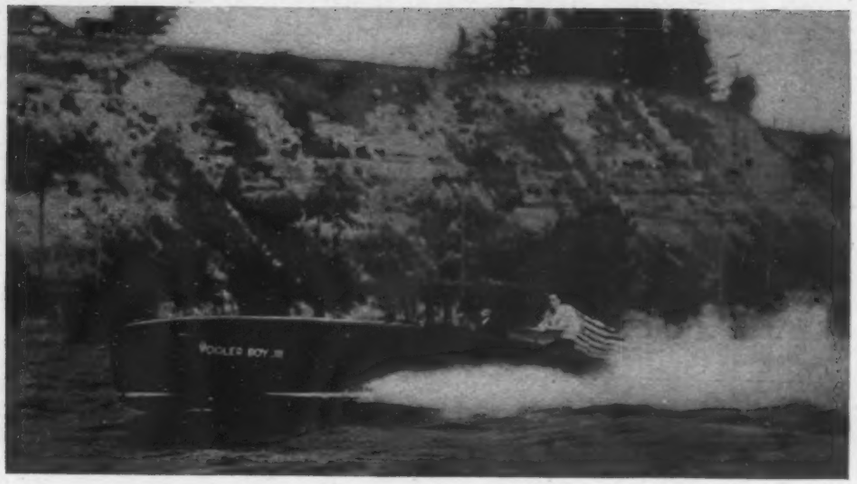
THE pleasure that comes to a man who takes an active part in piloting a speed craft, is in no degree less interesting and exciting than automobile racing or any other virile competitive sport. Motor speed contstes on the water are a comparatively young sport, but now that practically all contests are conducted on one uniform and equitable basis, they are fast growing and bid fair to become a very popular recreation.

The chief obstacle which has prevented hearty co-operation and thus promote a spirit of good sportsmanship in speed boat racing has been the presence of professionalism—the sordid gambling element. Sport for the sports' sake is the only foundation upon which it is possible to build an association organized for the purpose of promoting a sport. The American Power Boat Association was organized in 1903 to undertake this much needed work. Before this time, the lack of a parent association to act as an authoritative body and issue definite rules upon which all speed contests could be conducted on a basis of fair play to all, was very much in evidence. Every yacht club could and did hold races under any rules that suited them. This looseness and lack of uniformity in rating naturally led to much dissatisfaction and resulted in discord.

The continued efforts of the A. P. B. A. to put the national sport on a high plane has at length born fruit, and as the gambling element has been entirely eliminated from this organization, it has brought in year by year many new clubs to affiliate with the present body. As the present rulings have been most carefully formulated to show an equal degree of fairness to boats of all types, every man who has a liking for boat racing is assured of a square deal, and there is ample compensation in the thrill



LE-TAH-HE IS A 20-FOOT HYDROPLANE POWERED WITH AN 8-CYLINDER STERLING MOTOR. SHE IS AN EXAMPLE OF THE UP-TO-THE-MINUTE SPEED BOAT OF TO-DAY



ONE OF THE FASTEST BOATS ON THE PACIFIC COAST IS VOGLER BOY III

of the sport to prove incentive enough for any broad-minded sportsman.

The high speed attained by boats like Miss Minneapolis, Miss Detroit II and Whip-po-Will, Jr., may make it impossible for many men to enter in competition for the Gold Cup, but this should not discourage boat racing, but serve to stimulate it. The owners of smaller speed craft will find just as much keen enjoyment in racing smaller and less expensive boats. This has been proven so in the many contests given each year by our yacht clubs, and as the Gold Cup rules are just as desirable to apply to the smallest craft as the largest, they work out just as fairly to encourage good sportsmanship and mutual cooperation for the good of the whole sport.

The accompanying photographs of Vogler-Boy, Le-tah-he, and Miss Peoria are interesting examples of up-to-the-minute speed boats and their Sterling motors may be expected to develop a good burst of speed and the Yachting world will undoubtedly hear from them when the racing season opens.

## Demologos, the First Steam War Vessel

OCTOBER 29th marked the anniversary of the launching of the first steam war vessel, the mother of all those gigantic, death-dealing machines which now roam the seven seas. Every superdreadnaught of to-day is the descendant of that little craft, which was launched on October 29th, 1814, just 103 years ago, at the shipyard of Adam and Noah Brown, in New York, and which was christened the Demologos. This pioneer ship of the world's steam navies, was the creation of Robert Fulton and flew the Stars and Stripes of the infant republic. It was in 1813, when the United States was at war with Great Britain, that Fulton suggested the building of a steam war vessel. His plans were accepted by the Washington authorities, and in June, 1814 the keel of the Demologos was laid.

Thousands of people gathered to witness the launching of the queer vessel, which was described as a floating battery, and the designation was apt, for, as one commentator said, her "bulk and unweildy form seemed to render her as unfit for motion as the land batteries which saluted her." On her trial trips, however, she is said to have "moved with remarkable celerity," this "remarkable celerity" was at the rate of four and a half miles per hour, and Captain David Porter was so well satisfied with her that he declared he would not change her if he could.

Designed for the purpose of wiping the British Navy off the sea, the Demologos was completed too late to accomplish that object, and her career was brief and inglorious. After the close of the war she was rechristened the Robert Fulton, in honor of her inventor, and she became a receiving ship at the Brooklyn Navy Yard. In 1828 an explosion of powder sent her to the bottom, at the same time killing twenty-four and wounding nineteen of her crew.

It was not until 1837 that the United States built a second steam war vessel, the Fulton II. One year later Great Britain launched the first vessel of her great steam navy. In 1840 England had two steam war vessels, the Nemesis and the Phlegethon, which were sent to China, where they acquitted themselves so well that the admiralty at last realized that steam was to be the motive power of the future, in war-ships as well as commercial vessels.

## The Aerial Age

AT the offices of the Aircraft Board the impression prevails that when a flight is attempted having its object the crossing of the Atlantic Ocean, the vehicle employed will be one of the huge flying boats that have been, and will be, built and developed in the United States. For it is craft such as these because of their ability to remain afloat for an indefinite length of time and giving protection to their crews in case of mishap, that are most adaptable for this service.

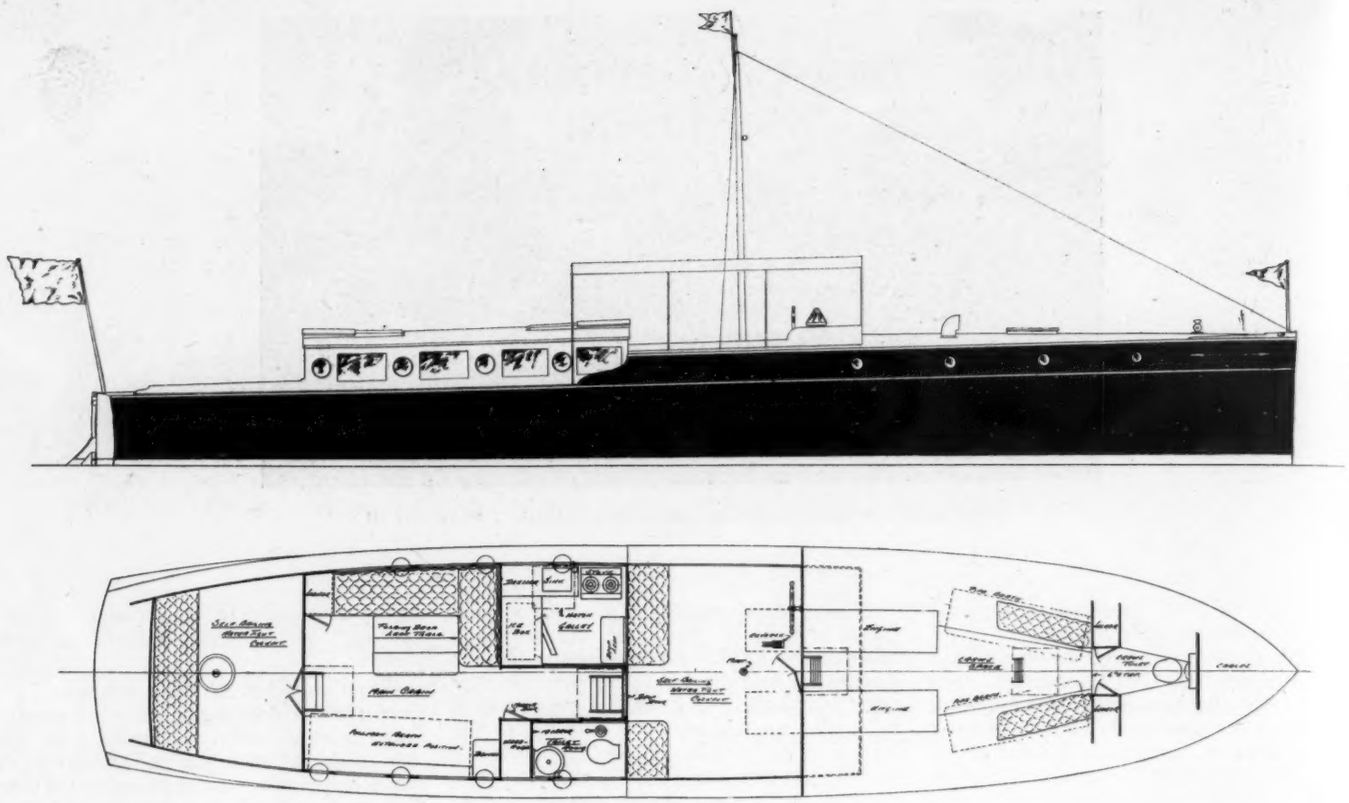
When the Curtiss Aeroplane and Motor Corp. planned America, a craft that was to be flown from America to England in 1914, the prospect of a successful trip by air plane across the vast expanse of the North Atlantic was good, and had it not been for the breaking out of the terrific war in Europe, without doubt before now some one would have had the honor of being the pioneer of this great adventure. The war though upset all plans made by Mr. Rodman Wanamaker, owner of America, and the venture was set aside until more peaceful times.

To date no definite arrangements have been made for a trans-Atlantic voyage by air, but according to all authorities including the Italian aviators now in America who are demonstrating the capabilities of the big Caproni tri-plane and other smaller types of Italian air craft, its realization seems certain.

England's aeronautical experts are of the same opinion. They point to the big British Handly Page bombing machines and a representative of the company states that it was the war only that prevented airplane communication between the old world and the new world.

Nowadays it is no feat at all for an airplane to make a non-stop trip of four to five hundred miles and at the marvelous rate of one hundred and forty miles an hour.

Without doubt the aerial age is here with both feet and those men that are skeptical as to the value of aircraft will see within the next few years the utilization of airplanes not only as pleasure vehicles, but as a part of our vast system of transportation, bearing passengers, mail and express by air route more quickly, more safely and with less expense than through any other method.



# Janice Has a Speed of 27 Miles an Hour

IN 1909 a 40-ft. motor boat of unique type made its appearance, she was Kathmar and was built by the Luders Marine Construction Company. Her uniqueness was that she had a cockpit amidships, abaft of which there was erected a cabin house in which there was full head room combined with splendid light and ventilation. Forward of the cockpit under the raised deck was a stateroom fitted with comfortable berths and a toilet room in the bow. The motor was installed underneath the cockpit floor where it was out of the way and yet accessible through hatches in the cockpit floor.

Since the building of Kathmar, boats of her type have been developed by the Luders Company and through successive types steadily improved. Boats that typify the stages in the creation of this type are: Ranger, Oriflamme, Arroyo, and, of course, the present day 52-footer Janice, having a speed of about 27 miles an hour and with all accommodations below for two people in addition to her crew.

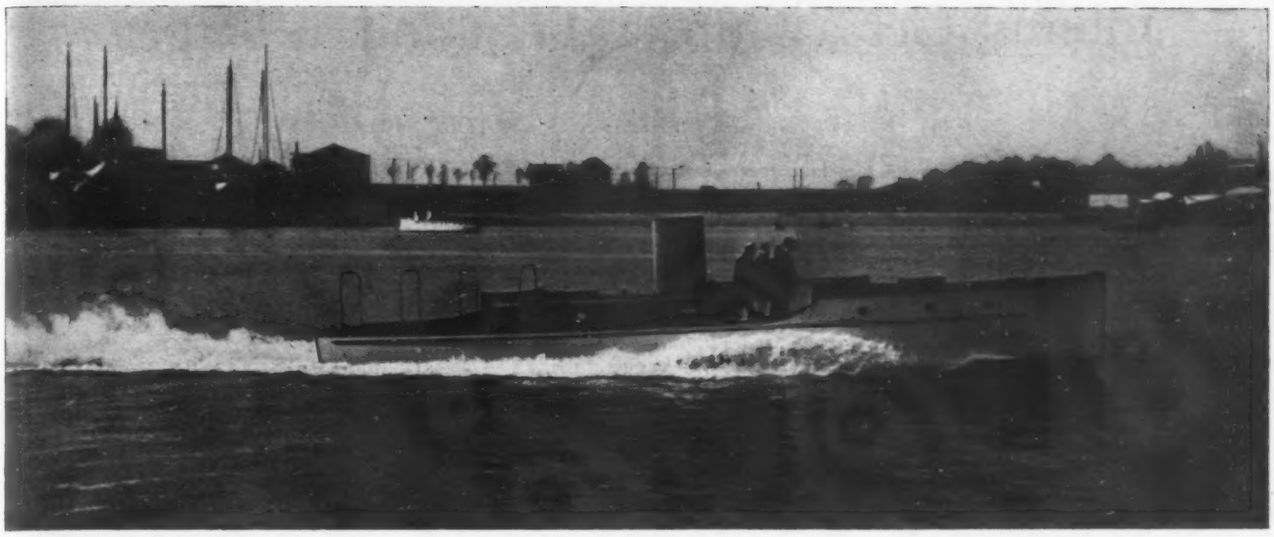
Two 8-cylinder Van Blerck motors are installed and it is these that through their concerted power make possible the speed obtained. Janice is owned by Mr. W. P. Foss of Nyack, New York, and was in use all last summer cruising up and down the Sound and through the inland waterways that lead to Lake Champlain.

*IN February Yachting will be launched a new service department, created for the sole purpose of assisting the new hand to pick out just the right kind of yachting merchandise he may be in need. This department will be christened THE MARKET PLACE, and its symbol will be YACHTING'S "A 1" seal. Look it up, shipmates!*

## Trap Shooting at the New Rochelle Y. C.

BECAUSE of the N. Y. A. C. not shooting on Sundays this season, the New Rochelle Y. C. has been fortunate enough to have a number of N. Y. A. C. shooters join their club and it is evident they are going to have one of their best seasons, both as to the number of men shooting and as to their ability to put a strong team in the field for any inter-club competition. Recent acquisitions to membership include such crack shots as McVey, Spotts, Vanderveer, Ham, Delahanty, Talcott, Ogden, etc. They have not gotten properly started as yet but now both traps are in commission and they will no doubt commence to make a much better showing as to attendance, etc.

The Dupont Company, as usual, have donated a watch charm to be offered as a prize and this will be shot for during the month of January on the first twenty-five targets.



SINCO IS A WONDER FOR SPEED AND STILL HAS ALL THE EAR MARKS OF AN ABLE CRUISER

# A Day Cruiser With Good Lines and Speed

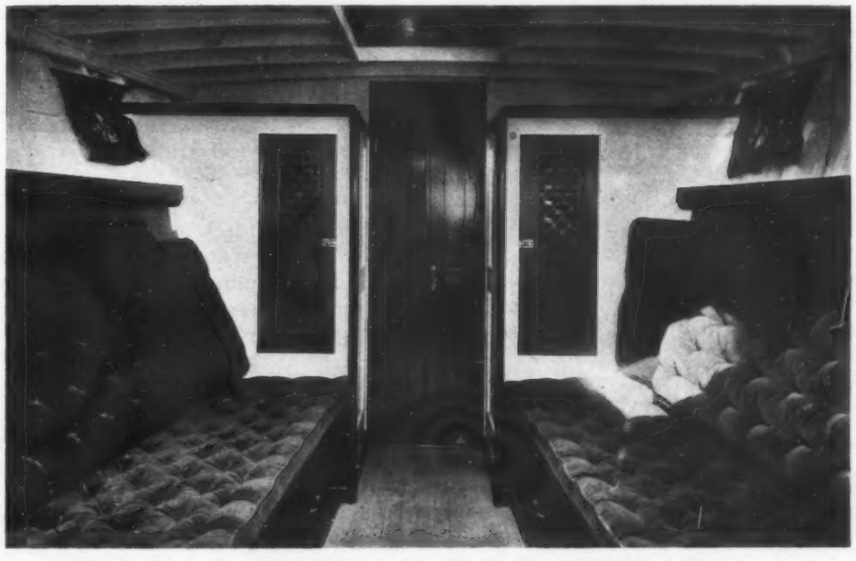
*A Fast and Luxuriously Comfortable Cruiser With Good Seagoing Qualities*

A VERY interesting type of V-bottom cruiser is that of the 60-footer Sinco, shown in the illustration. This utility craft from the board of Wm. H. Hand and built in the yard of Robert Jacob for Mr. H. T. Sinclair of New York City, is principally used for the maintenance of a fast ferry service between the Battery and the owner's Long Island summer home.

The lines of Sinco are representative of the refinements of design which characterize this popular type from many others. Sinco is, in fact, a typical express cruiser, developed from the lines of the famous Countess. In construction it closely follows the best practice of up-to-the-minute yacht building.

The power plant of two 8-cylinder 6¾ in. by 7¾ in. Duesenberg motors of the Patrol model drive the propellers at approximately 1300 revolutions a minute which maintains a cruising speed of thirty miles an hour.

Ample deck space provides for the comfort of guests when the craft is used for day trips and the arrangement below decks is well planned to afford every convenience that can be well incorporated in a boat of this type. The bridge is placed forward and a comfortable cockpit is located aft. Under the forward deck is a spacious and well planned cabin, fitted with all necessary transoms. Pullman berths, ample locker room and so on. The toilet room is situated forward and in the motor compartment amidships is a very complete galley.



THE CABIN IS LIGHT, ROOMY AND SPLENDIDLY FURNISHED AND EQUIPPED

In a boat of this type are happily combined many interesting and desirable features which distinctly stand out and make it a utility craft. The speed of the express runabout—the convenience and comfort of the cruiser, and much of the seagoing qualities of deep-water craft have been incorporated in this carefully worked out design. It is a boat which fills an important place in the yachting world, and a particulary useful craft for making short fishing trips.

While the all-around motor-yacht is, for obvious reasons, an impossibility, a boat like Sinco will measure up well as a many-purpose craft. For the summer home beside the sea, a boat of this kind will prove as useful as a motor car, and afford an unmeasured pleasure for owner and guests.

# Johnny Get a Gun, a Trap and a Target

By The TRAPSHOOTING EDITOR

THERE is born in most men a deep and abiding regard for a gun—a heritage passed on to us from our sturdy ancestors, who treasured the bell-mouthed blunderbuss for its dependability to replenish the larder and to protect when danger threatened. Our Puritan Fathers went to church with a gun on their shoulders and the colonization of the American continent was accomplished by fire-arms. The gun has played so important a role in making our history a glorious, unbroken chronicle of independence, that the reverence with which our forefathers held their flintlocks has come down to us and is well reflected in the marksmanship which distinguishes the American as the best shot in the world.

We are no longer compelled to attend services with a gun, but the smooth-bore continues to serve us well as a recreation. Upland and wild-fowl shooting is exciting and fascinating sport, but as native game retreats as forests are felled and the ground is broken to the plow, another phase of gunnery has come to afford the dweller in town a chance to handle his favorite arm.

The pleasure of shooting targets of clay may, at the first glance, appear tame sport to the hunter, but once tried nine sceptics out of ten are quickly converted. Trapshooting is by no means a dull and insipid recreation. There is plenty of action and excitement to keep one mentally alert. Trapshooting is a virile sport and replete with much of the variety which makes live bird shooting a recreation of appealing charm. From the moment the shooter takes his stand at his station, he participates in a game where individual work alone is responsible for the result. As the gunner stands alert, with nerves tense and finger crooked in preparation for pressing the trigger, he experiences all the eager, anticipating thrill of the man who watches his dog point grouse or quail in the stubble. Then comes the signal, "Pull!" and as the target rises swiftly before him, eye, brain and arm perform as one to estimate in a flash the lead, and cover the clay to score a break.

All the problems which lend interest to wing-shooting, all the decisive action which enters into snap-shooting, are happily combined in shooting the clay. And no better setting can be found to stage this interesting sport than at our yacht clubs. The social life of the club is likely to lag when the yachting season is over, and members who best enjoy outdoor life, are kept fraternally alive in the atmosphere of good fellowship which is ever found when fellows get together at the regular club shoot.

But it is by no means necessary to withhold the fun of handling a gun from our wives and sisters. Trapshooting is undeniably a manly sport, yet there is nothing rough about it, and every woman who feels a call of the primitive, may freely participate in this phase of gunnery and feel assured that nerves and body will quickly respond and gain through the discipline afforded by the sport.

And the boy, why overlook him? Whatever is good for man and for woman is of benefit to the boy. The splendid training of eye and brain which shooting, more than any other sport promotes, is of real value to the American boy. Football and track competitions may prove too strenuous for many boys, but shooting is a sport where mental as well as physical qualities count, and the chap who is small for his years stands just as good a chance to shoot to first honors, as the best developed lad. Every boy is born with an enthusiastic desire to own a gun, and this natural wish should be gratified. If the boy is properly instructed in early life how to shoot, all danger incident to the handling of fire-arms without adequate instruction and knowledge is avoided, and the boy is the gainer by indulging in a manly sport that schools the nerves and trains the mind to act quickly and with precision. The editor has personally instructed several boys to handle a gun safely and well and his experience prompts the belief that ten years is not too early to begin the introduction to this wholesome and manly recreation.

Another feature which makes this typical American sport so enticing lies in the fact that its enjoyment calls for no expensive equipment. The sport may be as keenly enjoyed by a few members of a little club, or two or three individuals for that matter, as at the most elaborate traps installed at the most luxurious yacht club. With a group of good fellows, a hand-trap and a supply of clay targets, you have the "makings" for a splendid little shoot. By conducting all competitions according to the accepted ethics of the sport, even the smallest affair may be firmly established on a clean-cut basis, where fair play and good fellow-ship are the governing factors.

TRAPSHOOTING IS A VIRILE SPORT, REPLETE WITH MUCH OF THE VARIETY WHICH MAKES LIVE-BIRD SHOOTING A RECREATION OF APPEALING CHARM

The equipment for trapshooting may consist of a hand-trap or one of the larger and heavier machines. All work on the same mechanical principle, having a projecting device operated by a strong coiled spring, which throws the target in the air with a rotating flight, at any desired angle up to 45 degrees and to the right or left of the center line of the trap. The standard distance for projecting targets is from 45 to 55 yards, and the elevation is from 6 to 12 feet, at a point 10 yards in front of the trap.

The target is a saucer-shaped disk, 4¼ in. in diameter and 1¼ in. in height and a trifle less than ¼ in. thick. The material is a compound of pitch and clay and the color blue-black.

It is unnecessary to have any particular kind of a gun to enter in any open competi-

(Concluded on page 48)

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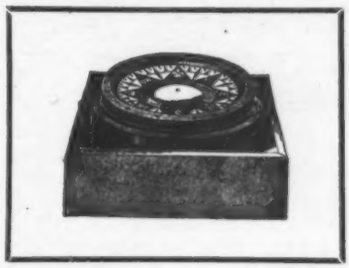
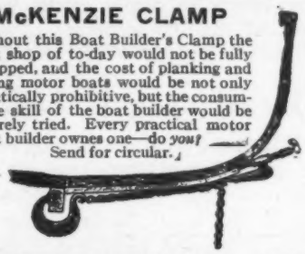


**McKENZIE CLAMP**

Without this Boat Builder's Clamp the boat shop of to-day would not be fully equipped, and the cost of planking and ceiling motor boats would be not only practically prohibitive, but the consummate skill of the boat builder would be severely tried. Every practical motor boat builder owns one—do *you*? Send for circular.



VISITORS TO THE MOTOR BOAT SHOW ARE CORDIALLY INVITED TO MAKE USE OF DURKEE'S BOOTH

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Can be adjusted from a straight bar to a hoop and therefore equally valuable for either Auto or Marine Work. Absolutely rigid at all angles. Fits any shaped surface. No better clamp for boards or removing bolts. Folds into small space and can be increased to any length. Send for circular.

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* * * * *

## Do We Have to Hand It to Them?

*(Concluded from page 6)*

Dr. Lister, of England, should be recorded. Edward Jenner, the discoverer of vaccination, and Harvey, the discoverer of the circulation of the blood, were Englishmen. An American taught the world the use of anæsthetics. Our dentists excel all others. They are employed by many crowned heads—even the Kaiser has his.

"The Teutons have not shown the engineering skill of the French, who cut the Suez canal, or of the Americans, who joined the Atlantic and the Pacific at Panama. The decimal or metric system by which they make their steel is that of Sir Henry Bessemer, of England. Many of the fruits and vegetables of which they eat an enormous quantity were brought forth by our own peerless Burbank. No wonder that the Germans can 'goose-step,' so high, for what else have they practised?

"Lavoisier, father of modern chemistry was French; Linnaeus, founder of botany, was of Swedish origin. To Hutton, of England, we are indebted for geology; to Maury, of Virginia, for the physiography of the sea, for analytical geometry; to Comte, of France, for sociology; to Germany, for *sauerkraut and pretzels*. Germany has not contributed her quota toward the world's achievement. How she struts in her foreign plumage. She is neither inventive, resourceful nor original.

"She has made no important geographical discoveries. Her neighbors have made many. What role did she play in discovering various portions of the New World? Did she establish any colonies? I thank God she did not. Her sons did not compose the crew of Magellan's fleet, the first to circumnavigate the globe. A German did not discover the North Pole, nor lead the way toward the South Pole. It is high time to cease talking of Germany's achievements unless one wishes to indulge in satire.

"History and study will reveal that the world's greatest teacher, scientist, inventor, discoverer, statesman, general, philosopher, preacher, painter, poet, architect, novelist or singer was not 'made in Germany.'"

## The Fabrikoid Wood Carrier

AN inexpensive article necessary in many homes and one that is of real utility is the fabrikoid wood carrier.

This article will be appreciated wherever the wood for the fireplace is carried in the arms, or in the ordinary cumbersome and leaky basket. The butler, maid or whosoever duty it is to replenish the fire, takes the carrier from a peg near the fireplace, or from a convenient closet, puts it on the floor of the cellar or wood shed, brushes off the wood wanted, lays it on the carrier and returns with it to the fireplace without scattering dust, dirt or pieces of wood throughout the house. He does not dirty his clothes nor does he ruffle his own, or the feelings of any one else who would be obliged to clean up after him.

When the wood is removed at the fireplace, the carrier is shaken over the fire to rid it of any particles remaining. It is then hung on its peg.

As fabrikoid, of which this carrier is made, is quite impervious, no dust can penetrate it, to come off later on one's clothes. For the same reason it is absolutely waterproof and easy to clean with soap and water. This will always restore it to its original beauty when company comes, or when you want it displayed for the envy of a neighbor.

Fabrikoid can be bought at most large department stores in a suitable variety of colors. The wood carrier described here was made of craftsman quality fabrikoid, which is a suitable grade for the purpose and can be easily stitched on the ordinary sewing machine. Drawings will show how much goods is needed and how same should be cut.

## New Offices of the Columbian Bronze Corporation in New York

MR. L. J. HALL, President of the Columbian Bronze Corporation announces that the general offices of the Corporation have been transferred from Freeport, Long Island, to their new offices located in the Hudson Terminal, 50 Church Street. In future all correspondence should be addressed to the Columbian Bronze Corporation, 50 Church Street, New York City, as this will be the future principal office of the Corporation and all general business will be transacted from this address.

The increasing growth of business and the big demand for Columbian products throughout the world has made this move necessary, and Mr. L. J. Hall states that while business in the past has been splendid, the future prospects are even better.

### *MARCH YACHTING WILL BE OUR FOR SALE NUMBER*

*THE outlook for the coming Yachting season is bright, and while fewer large craft will undoubtedly be put into commission, owing to the many yachts that have been turned over for Government use, there is every reason to view the season of 1918 from the cheerful side*

*The stimulus given our national sport by wide public interest in our patrol fleet of submarine chasers, bids fair to attract many younger men to the sport, and this will offset in a measure, the withdrawal of some of the larger craft to meet the national emergency for scout duty.*

*As our March number will contain many interesting and timely features regarding different types of boats, this issue offers a splendid medium for the advertising of Yachting wares. If you want to buy a boat, or have a craft you wish to sell, Yachting's March "For-Sale" number will prove of real service.*

## New $5,000,000 Airplane Concern

THE Standard Aircraft Corporation, with factories in Plainfield and Elizabeth, N. J., has been incorporated in Albany for $5,000,000 divided into $2,000,000 preferred and $3,000,000 common stock. Harry Bowers Mingle is President of the new Corporation and the Board of Directors is composed of Charles H. Day, C. Vernon Bradford, Daniel L. Meenan, Jr., C. G. Stratt and Mr. Mingle.

It was announced that the new concern now had millions of dollars worth of Government orders and expects to employ more than 8,000 men and women in the main plants. The new plant at Elizabeth, N. J. covers 87 acres and the main buildings have more than 300,000 square feet of floor space. There is also a 60-acre flying field and 5 acres of waterfront on which will be established the hydro-airplane hangers and test sheds. This plant represents an investment of more than $1,000,000. In addition to the two main plants, the Standard Aircraft Corporation has seven smaller factories in which parts of airplanes are made. It is expected that 60 airplanes a week will be the normal output of the new corporation.

## Trapshots to Train Aviators

THAT the Aviation Section of the United States Signal Corps has for many months been possessed of a complete roster of the best trapshots, both amateur and professional, in the United States and furthermore that it proposes to use some of them as instructors is worthy of more than passing notice.

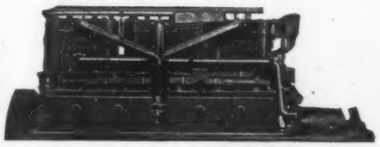
Thus we have it brought home to us in a realistic manner, the practical value of one of our greatest sports—trapshooting—which is to be a factor in the winning of the present war. Certainly no greater testimonial in favor of the "learn to shoot" idea could be advanced than that it has come to the front in a time of crisis like the present.

While many sources have been urging upon other branches of the army the wisdom of making use of the thousands of expert shots outside of the service, the Aviation Section has been getting together all the material available for its needs, and formulating plans for making the best use of it.

If expert trapshots are of value to the aviation training schools, there seems to be no valid reason why expert rifle shots should not be of value on the army rifle ranges.

FRANCES II—one of our 65-footers

We build yachts complete and there is no divided responsibility. Our 20th Century Motor, which we build in our own shop, is one of the leading engines. We are in position to build you a complete yacht, furnished and equipped, at prices that cannot be equalled when construction and finish are considered. Let US figure on your new yacht for next season.



6-Cylinder, 6½" x 8½" 65 H.P.
Twentieth Century Engine

**N. Y. Yacht Launch and Engine Co.**
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New York

Weighted soles insure an upright position during the jump and in the water

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IS AN ASSURED THING FOR THOSE WHO GO VOYAGING SUPPLIED WITH THE FINEST OF ALL LIFE SAVING EQUIPMENT, AN

## EVER-WARM SAFETY-SUIT

THE fame of this *real life preserver* is already world-wide. The suits are protecting whole Hospital Units—nurses, doctors, ambulance drivers—engineers and army officers on the way through the U-boat zones. They are serving in the Patrol Squadron and on boats like the U. S. S. "Mayflower." They are carried by passengers on practically every transoceanic liner and are finding a welcome among yachtsmen everywhere. Don't let your loved one sail without one; for, wearing one,

**HE CANNOT DROWN! HE CANNOT CHILL!**

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# The Finest Boat in the World

won't bring much pleasure to the owner unless he knows how to handle it. You spend hundreds, yes, thousands of dollars on your boat, equipment, help, etc. Is it too much to spend two or three dollars to get the *best service* from your boat, the *biggest* return from your investment? Why be content with poor sport when the way to the best is here?

The books below were written by the highest authorities, experts use them, wise boatmen regard them as indispensable.

These are 80 cents each; postage 5 cents:

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| NAVIGATION FOR THE AMATEUR | MARINE MOTOR |
| SMALL BOAT NAVIGATION | MOTOR BOAT |
| SMALL BOAT BUILDING | GASOLINE MOTOR |

These are $1.00 each:

BOAT SAILING - - - - - - - - - Postage 10 cents
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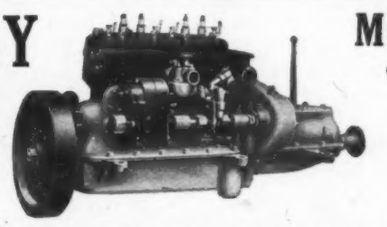

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Designed strictly for *marine* work—a real *marine* motor with all the marine features you have always wanted at a *moderate* price. Manufactured and backed up byan old established and responsible concern.

GRAY TWO-CYCLES—Recognized all over the world as a standard. In sizes 3 to 11 H. P. **Send for big Illustrated Catalog.**

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# MATTHEWS CRAFT

*BECAUSE of the fine record on the construction of its quota of 110-foot submarine chasers, the Matthews Boat Co. has been especially complimented by the United States Navy Department. The boats were splendid examples of hull building, and what is more important to the Government and the nation, THEY WERE DELIVERED ON TIME.*

*To complete in record time, a contract taxing the entire capacity of the plant, is the acid test of a busines organization. But speed and efficiency are built into the Matthews business, just as much as the far-famed quality of Matthews Craft.*

*The Matthews Boat Co. has the facilities and equipment to build a limited number of hulls for commercial service quickly and economically. Tugs; Barges for canal, lake and coast-wise trade up to 200 feet; Auxiliaries; Ferries; Fishing boats.*

*While our limited building space lasts, we will serve you courteously, efficiently, and without excess profit just as we have served all Matthews customers for many years back.*

***The Matthews Boat Company***
*Marine Railways, Storage Basin and Works*
***PORT CLINTON, OHIO***

In determining to use the trapshots of the United States to teach wing shooting, the judgment of distances and the leading of shots, the Aviation Section has acted wisely.

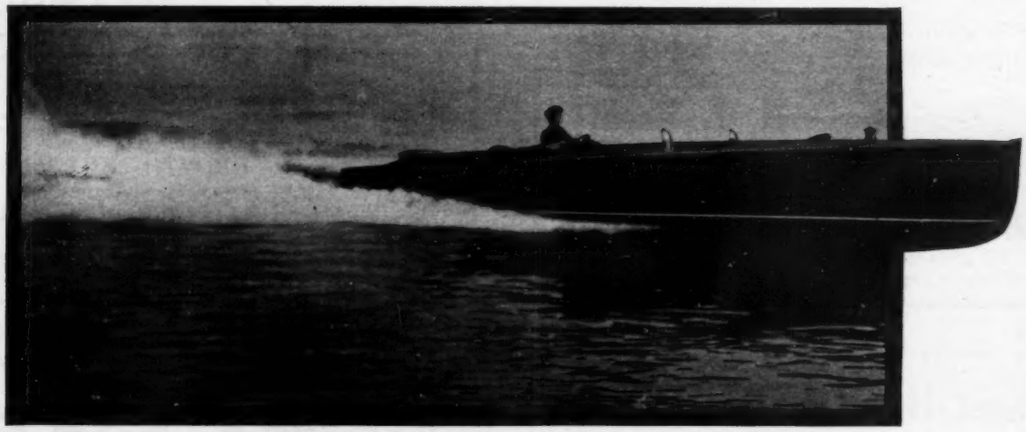
In responding to the tentative call for such instructors, the members and the officials of the Interstate Association have acted just as they might have been expected to act—readily and with enthusiasm.

It is pleasing to note that the question of earning money through trapshooting, which constitutes professionalism in the scattergun game, has been so satisfactorily disposed of. When the question of mobilizing the trapshooters came up, the professionals, almost to a man, answered immediately. There was no reason why any of them should not take employment with the army as paid instructors. With the amateurs, for a short time, things were different. While most of the best amateur shots were willing to "Do their bit," the question arose whether taking such employment for such a purpose would not constitute professionalism.

It is hard to believe that a man would be barred from the sport of trapshooting on a charge of professionalism if he answered a call and took employment involving a patriotic duty. The chances are that the Interstate Association officials who settle all questions of professionalism would not have regarded such proposed employment as mitigating against a trapshooter's status as an amateur.

Fortunately, however, the Interstate Association officials have seen fit to solve the question by holding that such employment will not constitute professionalism.

It is to be hoped that the plans for instructing aviators in shooting at moving objects through the use of shotgun will develop that prime necessity of any fighting force—a corps of aviators who can be trusted to bring down the enemy planes.



THE LATEST CREATION OF JOHN L. HACKER IS STERLING POWERED

# Sea Pup II

*The Runabout is coming into its own*

By M. E. MUTCHLER

THE season of 1918 marks a new era of motor boat building, in that the experimentation has terminated and the industry is now able to produce a runabout the equal, and in some respects the superior of its land cousin, the automobile.

The latest creation of John L. Hacker of Detroit is one of the most outstanding examples of this. The craft is Sea Pup II, a 32-ft. by 6 ft. 3 in. refined, V-bottom runabout, built for Mr. O. E. Dunlap Jr. of Dallas, Texas. Mr. Dunlap is one of the members of the firm of the Ferris Dunlap Auto Supply Company, and the purchase of a water vehicle by a man financially interested in the land variety is indicative of the call of motor boating to the individual.

Sea Pup II travels over 32 M. P. H., the attainment of which shows that the present models of marine runabouts have been brought to the same state of perfection as the automobile.

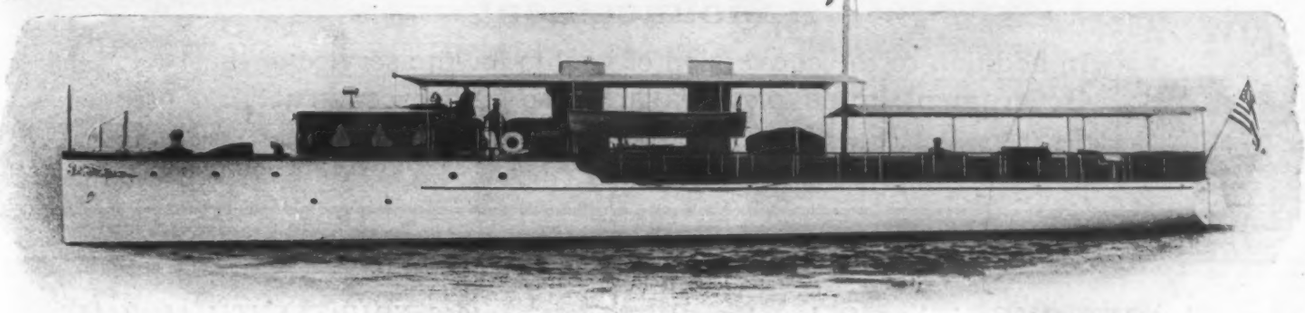
The craft is built to carry eight passengers and the type of controls are such that no gear shifting is necessary beyond the movement of a lever from neutral to ahead or from neutral to astern, whichever way it is desired to have the boat travel. The reliability of the present high speed motor of to day is equal to the highest class of automotive power plants.

Marine motors are, in the main, built with electric starters and generators, so that starting is no longer a matter of trying to wind up 50 H. P. or more. You press a button and the motor starts quietly, you engage the clutch, and after the speed is controlled by the simple movement of the throttle lever; and the roadway is bounded only by the expanse of the river, lake or sea upon which you may happen to be yachting.

Craft like Sea Pup II are the acme of the achievements of both the boat and the engine builders. The craft runs on an even keel, with the bow not too high out of the water, and the vibration is no more than to give one the feeling of security which comes from the association with tremendous power, perfectly controlled.

The motor in Sea Pup II is a Model FS, 4-cylinder, 90–100 H. P. Sterling with a bore of 5½ in. and a stroke of 6¾ in., one of the Sterling models which incorporates the counterbalanced crankshaft. The motor turns a Hyde Windlass 18 in. by 28 in. propeller 1200 to 1400 R. P. M.

Built by **LUDERS**
**Marine Construction Co.** **Stamford, Conn.**
*The last word in yacht design and building*



Copyright, Brown Dawson

Aurore, a 96-Footer, built by us for Mr. Stuart Wyeth.

* * * * *

## Through The Canal

(Concluded from page 20)

nights of actual running, into all sorts of weather, and under all sorts of skies, means on a small boat such as ours, and while there was never a time on the entire trip that the Lasata was in a moment's danger of losing the life, liberty and happiness of any of her voyagers, we all realized as never before that had it blown a full gale here, or possibly a different direction there, or had the engines failed to do their duty at this point, things might have turned out very differently indeed. I presume that, with the keen edge worn off of some of the uncomfortable experiences, we will all be glad and anxious to tackle another similar cruise, but there was no one on board on the fair Sunday morning of the sixth of September when the anchor finally went down, who would have cared to have turned around and made the trip over again.

But my! what tales we have to tell.

* * * * *

For any one who might take this trip as we did I would offer the following information:

At Havana, Cuba, tropical fruit and fresh vegetables are cheap and good. A motor boat will come alongside. Meat, butter, and eggs are high. Gasolene costs 33 cents per gallon, oil in proportion. At the time of our visit all of Cuba was considered as a plague port and any vessel coming from there was subject to quarantine. By all means get bill of health from local authorities and also from consul of country to which you are bound. Charts and marine supplies can be had.

Kingston, Jamaica. This harbor is very rough for small boats, Port Royal anchorage being better. With the exception of tropical fruits, supplies are high. Gasolene can be purchased at about 27 cents. Quarantine restrictions are very strict and if not complied with may delay the boat six to ten days.

At Colon and the Canal Zone, supplies of every kind can be had and at surprisingly cheap prices. Gasolene, however, can be bought cheaper from individual agents at Colon for 23 cents per gallon. At Panama, gasolene is very expensive, being from 40 cents to 60 cents per gallon. Thus all repairs, supplies, etc., should be planned for on the Colon side.

At the Latin-American and Mexican ports, gasolene can be arranged for through the Standard Oil Company or Union Oil Company of California, the price ranging from 30 cents to 35 cents delivered in cases. Provision can be had at all principal ports. Due to the fact that there is no late published information regarding the west coast of the Central American republics and Mexico, (although I understand the United States Government is now preparing a "blue book" or coast pilot) the instructions of Captain Brennen may be of interest.

* * * * *

### CAPTAIN BRENNEN'S SAILING DIRECTIONS

Panama Bay and Gulf of Panama:

San Jose Rock to Taboquilla Island ½ mile off, thence to Bona Island 1 mile off; thence to Cape Wala 2 miles off; thence to Mono Purreos (caution—ebb tide sets to southward; flood tide to northward). Mono Purreos to Jicarita Island 2 miles off. Jicarita Island to Montuosa Island 3 miles off; Montuosa Island to Burica Point 10 miles off; Burica Point to Cano Island 6 miles off; Cano Island to Cape Blanco 1 mile off; Cape Blanco to Gucories Point 4 miles off (nothing inside). (Caution—current sets north about 2 knots per hour). Gucories Point to Cape Velas 3 miles off. From Cape Velas stand up towards San Juan del Sur and skirt the coast according as the wind may be strong or light. Thence to Cape Desolado. From Cape Desolado straight across to Acajutla, looking out for squalls at night out of Gulf of Touseca. Off Acajutla look out for the reef Remedios Point. Acajutla off San Jose and thence to off San Benito. (Caution—from San Benito keep close in shore all around the Gulf of Tehuantepec to Port Angel.)

Port Angel along the coast. Galeria Point to Maldouado Point 6 miles off, thence to off Acapulco. Acapulco along coast to Cape San Telmo (lighthouse). Cape San Telmo to Manzanillo and then to Cape Corrientios. (Caution—from Manzanillo to Corrientios look out for current setting north.)

From Cape Corrientios shape a course for Cape San Lucas 2 miles off. Cape San Lucas to Point Tosco (Caution—shoal S 10° E. true 8¾ miles off Tosco).

Pt. Tosco along coast to Cape San Lazaro 3 miles off. Cape San Lazaro to San Enjemo. If at daylight, pass in through Dewey Channel and steer north to pass north end of Cerros Island. If at night, keep outside of Naridad Island and San Benito Islands, giving these islands a clearance of at least four miles on account of shoals. From north end of Cerros Islands to Cape Colnett (high and bold bluff) keeping clear of Sacramento reef.

Cape Colnett to Todos Santos Bay to the Coronado Islands to San Diego and thence to Los Angeles Harbor.

# TEBO YACHT BASIN COMPANY

FOOT 23rd STREET, BROOKLYN, N. Y.

## Announcement

In addition to the conversion of yachts for the service of the Government, mine planters are also under construction.

Notwithstanding the present active constructional work going on in our Basin, our yachting patrons can rest assured that their interests will be as carefully looked after in the future as in the past.

## At The Naval Training Schools

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*1918 FOURTEENTH ANNUAL*

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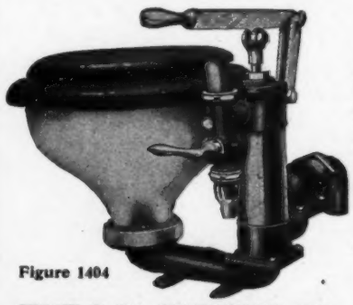

Figure 1404

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141 WEST 36th ST. NEW YORK

## Johnny Get a Gun

(Concluded from page 38)

tion under standard rules, the only requirement is that the size must not exceed 12-gauge. Smaller bores may be used at the option of the shooter, and while the 16 and the 20-gauge are occasionally used, the 12-gauge shotgun is the standard for trap and all kinds of game shooting. While the regular double-barrel hammerless, the repeater and the automatic are all used at the traps, the popularity of the sport has produced a distinct type of gun known as the single-barrel trap gun. But whatever the kind of gun preferred, the shooter should be certain that it is a good gun of its type. Engraving and specially selected stocks add to the appearance of any gun, but add nothing to the shooting qualities. The best advice that I know of is to select the highest grade gun you can possibly afford, and considering the shotgun from the practical value of a shooting iron, the best grade to buy to obtain the most gun value for the money, is the medium priced arm known as the standard grade. As the fit of a gun is as important to the shooter as its quality, the important points will be taken up in a brief but comprehensive discussion in the next issue.

## Building 12-Foot Dinghy

(Concluded from page 29)

at the corner. The pieces are to be 1¼ in. thick and 2½ in. wide. They are to be nailed to the frames and then bevelled off to the proper angle so that the planks will fit properly against them.

KEEL Battens: The keel battens are to be of yellow pine or oak ⅞ in. thick and 6 in. wide. They are to fit down tight on top of the keel and against the fore and aft side of the frames and floors. They fasten to the keel with boat nails clinched over. They are to be bevelled to suit.

PLANKING: The planks are to be of clear cedar or cypress, ½ in. thick and in one piece from bow to stern. They are to be of such width that there are to be two side planks and two bottom planks on each side. They rabbet into the stem and screw to the transom. The fastenings at the frames are to be 2 in. galvanized boat nails. Fastenings are to be not over 4 in. apart. The planks fasten to the chine with boat nails clinched over.

BREAST Hook and Quarter Knees: The former is a triangular piece of oak or yellow pine 1½ in. thick fitted tightly up against the stem and the inside of the planks at the bow. It fastens from the outside with 2 in. boat nails. The quarter knees are to do similar service between the transom and the planks at the stern. The arms of the quarter knees are to be at least 8 in. and the fastenings through bolts.

CLAMP: The clamps are to be in one piece of yellow pine 1½ in. by 2 in. They are to run from breast hook to quarter knees on the inside of the frames. They fasten to each frame with boat nails. They are to be set down below the top of the frames far enough so that the deck beams will rest on top of the clamps.

CENTER Board Trunk: This trunk is to be made of two pieces of yellow pine 1 in. thick. The pieces are to be 15 in. wide above the keel and 18 in. long. They fasten on each side to the head ledges, and on the bottom they must be curved so that they rest solidly on the keel. Fasten from the outside of the keel with closely spaced 3 in. screws. All joints must be coated with thick white lead before fastening.

HEAD Ledges: The head ledges are to be 1 in. thick and 1½ in. wide. They fit down into the slot and are fastened to the sides of the trunk. The joints must be perfectly tight.

DECK Beams: The deck beams are to be of yellow pine or spruce, ¾ in. thick and 2 in. deep. They are to be crowned to suit the owner's orders, or as shown on the plans. They fasten to the side of the frames, and rest on the clamp.

DECKING: To be of ½ in. cypress or white pine, covered with canvas laid in white lead. The decking fastens to the beams with 2 in. boat nails.

COAMING: The coaming is to be ½ in. thick by 5½ in. wide. It can be shaped and curved to suit the owner's ideas. It fastens to the ends of the deck beams with 1½ in. screws.

SKAG: A skag as shown of ½ in. oak, about 2 ft. long and 4 in. wide will be found desirable to balance the boat under sail. It should be fastened with the after end 12 in. from the transom by screwing from the inside.

RUDDER: The rudder should be of oak ½ in. thick. It is to be tapered at the after edge and shaped as shown.

TILLER: The tiller is to be of oak, substantially as shown on the plans.

CENTER Board: The board is to be of ¼ in. steel plate according to the detail. It is to be fitted with a wooden cap at the top to prevent it falling through the slot.

COCKPIT Flooring: The flooring is to be made of oak or pine strips 4 in. wide by ½ in. thick. It is to be arranged so that the center piece can be lifted to get at the bilge.

LIMBERS: There is to be a ½ in. hole bored through every floor to allow the bilge water to circulate.

SEATS: The seats are to be of oak ¾ in. thick and are to be fastened to the frames so that they tend to strengthen the hull.

MOULDINGS: A ¾ in. half round moulding it to be run around the sheer and it is to be screw fastened at the ends and nailed in between.

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MAST: The mast is to be made of a clear, straight grained piece of spruce. It is to be tapered from 3 in. at the deck to 1¾ in. at the head and 2 in. at the heel. The heel is to step onto the stem piece with a notch joint. Where the mast passes through the deck there are to be 1 in. partner pieces fitted between the deck beams to take the strain. A 1¼ in. sheave is to be fitted in a square hole at the head to take the halliard.

BOOM: The boom is to be similar to the mast as far as material is concerned. It is to be 12 ft. long, 2¼ in. diameter at the center and tapered to 1½ in. at the fore end and 1¼ in. at the after end. It is to be fitted with a side boom jaw where it passes the mast. A leather or brass rubbing band should be fitted on the mast to take the rub of the boom.

GAFF: Similar to the above. 13 ft. long, 2¼ in. at the center and 1¼ in. at the ends. To be fitted with single halliard as shown.

## The Engineer

*(Concluded from page 24)*

of the wireless operator who flashed the distress signal out into the darkness of night and who was the last to abandon the ship, or, as the case might be, went down with her. But not one word about the engineer, who, deep down in the center of the vessel among the living, breathing part, keeps his eye and ear tuned to the quick and certain detection of discord in the vibrations of the engine, for he realizes that everything must be retained at concert pitch if the ship is to reach her dock.

The light, the heat, the water, the refrigeration, the steering, the power, the wireless and many other items depend upon the skill and genius of the engineer for successful operation.

It does not detract from the bravery and achievements of the wireless operator who, when the ship has been injured at sea, sends out the call for help, to know that it is the engineer, grimed by reason of his vocation, working in an almost inaccessible prison, who makes it possible to send the message that may bring relief. The fame of the captain, who, in picturesque attitude upon the bridge, attracts the admiration of the world, is not dimmed because the power, strength and force of the engineer was back of him, as he weathered the dangers of the ocean.

At last, when the vessel commences to go down does the engineer leave his post of duty? *Never!* But on the other hand, he remains to the very last, and with his fingers upon the ship's pulse does whatever is possible to prolong her life, and then he goes down with her to death and oblivion.

Upon the mighty monument erected to the memory of the world's heroes, let the name of the ship's engineer be written!

JAMES HENRY HARRIS, in
*The Odd Fellow.*

*YACHTING FOR FEBRUARY WILL FEATURE AN ARTICLE BY C. ANDRADE, Jr., ON THE BUILDING OF A 25-FOOT CRUISER*

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a trusted friend in whom you could place your whole confidence.

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**Suppose** he had driven his motor to the jumping off place and back—killed tigers in India and squirrels in Pennsylvania

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**And Then Suppose** he told you all he knew! He'd be rather an interesting chap to know wouldn't he?

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has done all of these things and is doing them. It has played the game for thirty-two years and the world is its playground.

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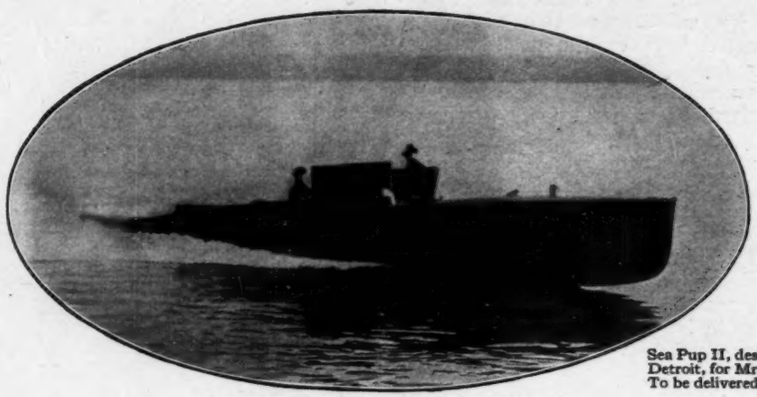

Sea Pup II, designed and built by John L. Hacker, Detroit, for Mr. O. E. Dunlap, Jr., of Dallas, Texas. To be delivered Spring 1918.

The genius of John L. Hacker, and the science which conceived the counter-balanced crank shaft Sterling, united, have produced a 32′ x 6′ 3″, V-bottom 6-passenger runabout, capable of 32 real miles per hour. The motor is a 4-cylinder, 5½″ bore, 6¾″ stroke, 90-100 HP. Sterling.

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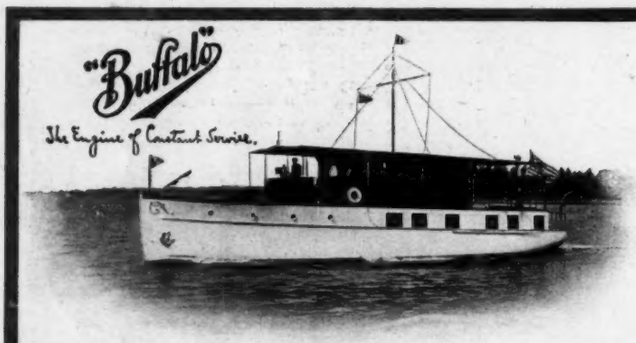


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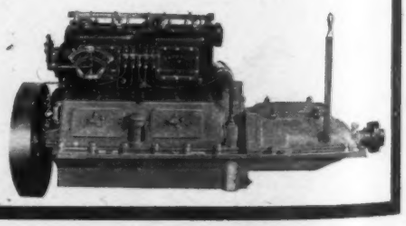

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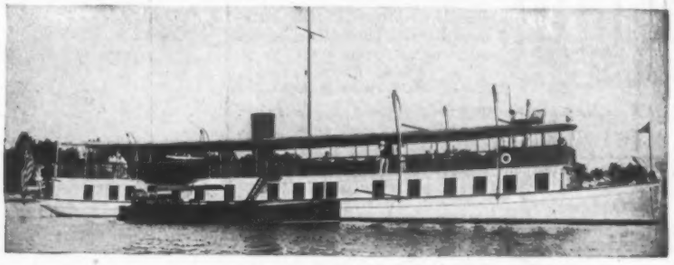
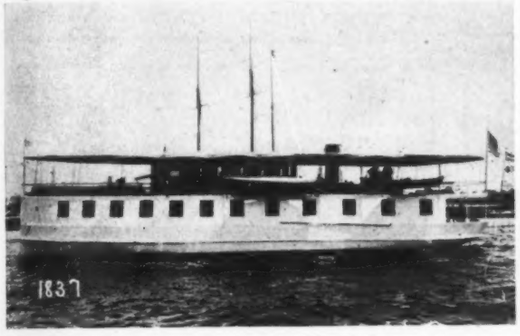
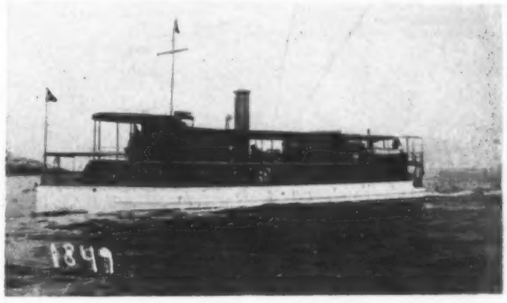


NO. 1848—SALE—CHARTER.—Modern houseboat, ideally suited for southern waters, 123 x 115 x 17.8 x 3.4 ft.; 2 Standard motors, 4 large staterooms, 2 bathrooms, saloon; very large shade deck; lighted by electricity and has new ice machine. Full particulars from Tams, Lemoine & Crane, 52 Pine St., New York.




NO. 1837—SALE—CHARTER: Commodious houseboat, 87 feet over all, 23 feet beam, 4 feet 7 inches draft. Twin-screw, two new 70 H. P. Buffalo motors, 5 large staterooms, dining saloon and deck saloon, 2 bathrooms; electric light, etc. Plans and complete particulars from Tams, Lemoine & Crane, 52 Pine Street, New York.

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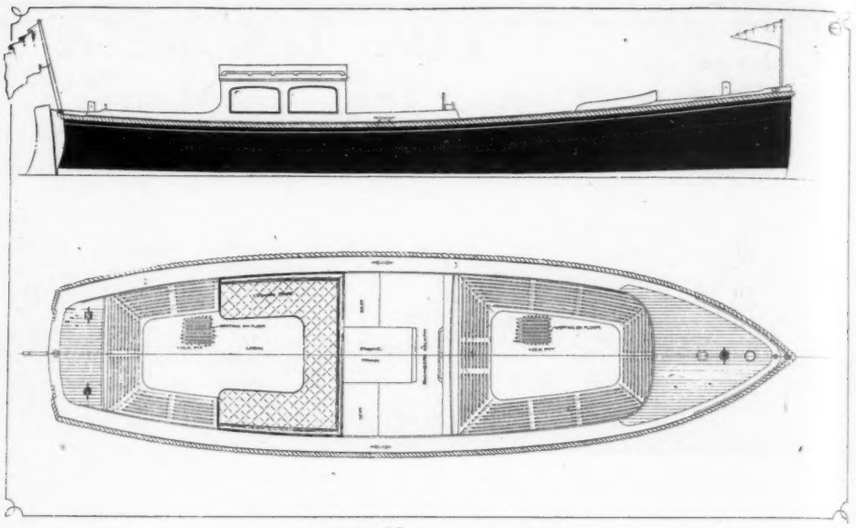

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**$2.50**

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A steel rod will catch just as many fish as the most expensive rod you might purchase. Besides there's no worry about breaking and no bother about packing. You can chuck it around almost any old way.

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Send me prepaid the V-D steel fishing rod and twelve months of ALL OUTDOORS. I enclose $2.50 with the understanding if everything is not satisfactory I may return the rod and my money will be refunded.

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## A Boat That Is Different

THIS little boat developed out of a rather interesting episode. Mr. Stuart Wyeth, one of the customers of the Luders Marine Construction Company, had occasion to be dining with Commodore Weber of the Stamford Yacht Club and Mr. Luders one evening at Delmonico's when in the course of conversation Mr. Wyeth declared himself to be in a rather reckless humor that night and felt that he would like to make somebody happy. A number of propositions were brought up with the idea of making some sort of improvement to the Stamford Yacht Club, of which we all three were members; finally the conversation turned to the subject of a new launch and Mr. Wyeth asked Commodore Weber whether such a boat would be acceptable to the club and being heartily assured of that fact, he then turned to Mr. Luders and said: "What would a boat such as the Yacht Club should have cost?" Mr. Luders after a few minutes figuring told him that a very attractive boat could be built for about $3500.00. Mr. Wyeth pondered over this half a minute or so and said: I tell you what you do, you get your company to spread itself and make a particularly fine boat that will cost $4500.00 and send me the bill. The result was that the Luders Company immediately designed and built the boat.

## Safety First

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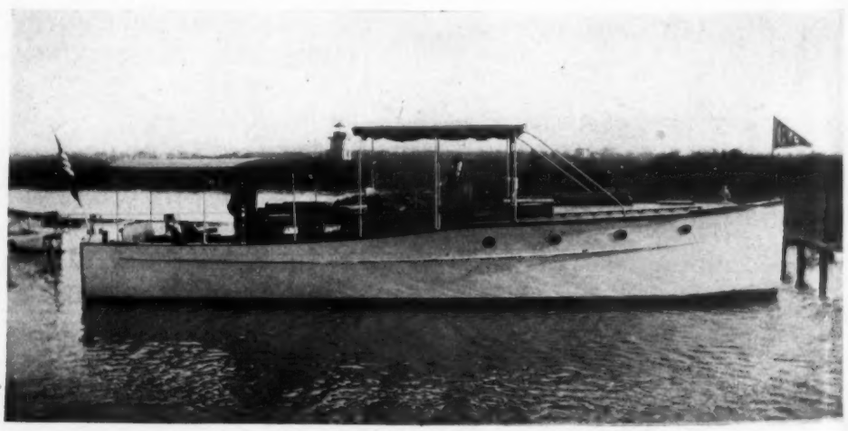
*(Concluded on page 91)*



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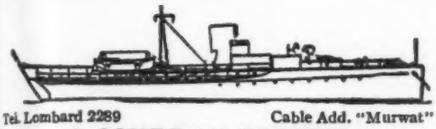
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